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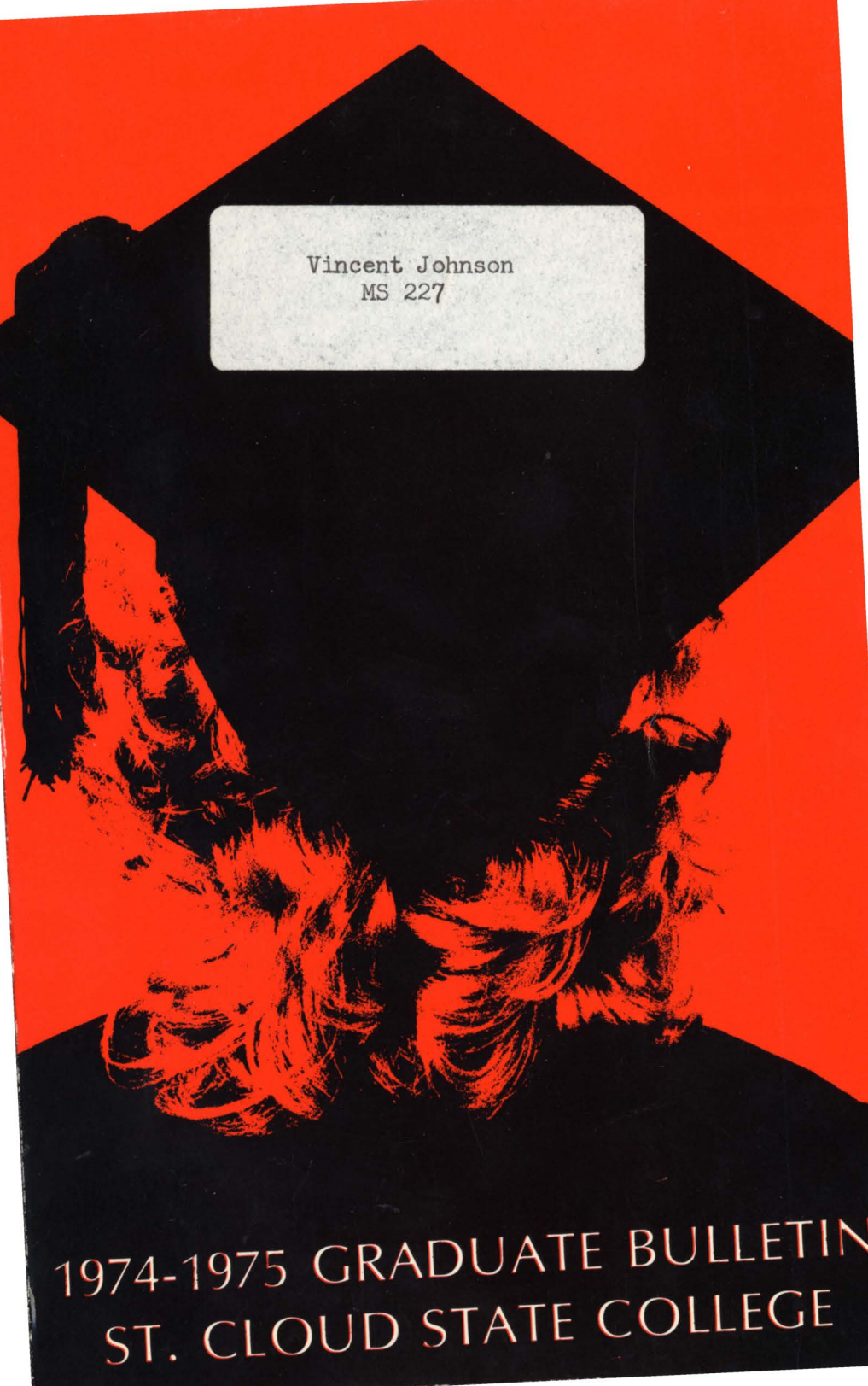
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Vincent Johnson
MS 227

1974-1975 GRADUATE BULLETIN
ST. CLOUD STATE COLLEGE

ST. CLOUD STATE COLLEGE GRADUATE BULLETIN 1974-1975

School of Business

School of Education

School of Fine Arts

School of Industry

School of Liberal Arts & Sciences

ST CLOUD/MINNESOTA 56301

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IMPORTANT

Graduate students are expected to become thoroughly familiar with the contents of this bulletin and are to assume responsibility for complying with the provisions that pertain to them.

OFFICE HOURS: GRADUATE STUDIES

Regular Academic Quarter

8:00 A.M. until 4:30 P.M.

After 4:30 - by appointment

Summer Sessions

7:30 A.M. until 4:00 P.M.

Evening Schedule

During the regular academic year, the Graduate Studies Office is open in the evenings during the first week of each quarter.

Lowell R. Gillett

Dean, School of Graduate Studies

Vernon L. Ludeman

Assistant Dean

ST. CLOUD STATE COLLEGE

HISTORY

The institution which is now St. Cloud State College first opened its doors as the Third State Normal School in September, 1869. The first building was the old Stearns House, a hotel which was purchased by the State Legislature for \$3,000 and was remodeled for use as a school. Classrooms for the normal school were on the first floor, classrooms for the "Model School" were on the second floor, and a girls' dormitory was on the third. The original faculty consisted of Principal Ira Moore and four assistants; the student body included 42 young women and 11 young men. In the years since this modest beginning, the school has developed into a college of established reputation with a physical plant valued roughly at \$40 million and a faculty in excess of 500 members.

This development from normal school to college follows closely the pattern of development of similar state institutions throughout the country. Until 1898 the St. Cloud Normal School was essentially a secondary school with a few students of college grade. From 1898 on, the Normal School began offering a full junior college curriculum, and in 1914 the high school phase of the program was dropped. In 1921 the college was authorized by the State Legislature to adopt the name of St. Cloud State Teachers College, and in 1957 the name St. Cloud State College was adopted. In 1925 it was authorized to grant the four-year degree, Bachelor of Education. The name of the degree was changed to Bachelor of Science in 1940. The 1953 State Legislature authorized the college to grant the master's degree and in 1967 the State Legislature authorized the college to grant the specialist degree for graduate work.

The college is not primarily a teacher preparation institution today. Authorization was given in 1946 to grant the Bachelor of Arts degree to students completing a four-year general education course. Following the same pattern, a two-year Associate in Arts degree in general or pre-professional education was authorized in 1948.

Today the college is a multi-purpose in-

stitution offering undergraduate and graduate programs of study in the School of Liberal Arts and Sciences, School of Business, School of Education, School of Fine Arts, School of Industry and the Graduate School.

PURPOSE

A democratic society depends upon citizens who are alert, tolerant, and responsible, leaders who are intelligent, educated, and committed to the public good, and institutions designed to develop such citizens and leaders.

This college provides a setting where each student can improve his talents, become more concerned about his obligations to his fellow men, and recognize that knowledge serves to identify man's past achievements as well as provide the basis for further progress. This college helps the student develop a respect and enthusiasm for learning, an appreciation for both continuity and change, and the recognition that the result of thought is frequently action. It is anticipated that this learning and recognition will culminate in the development of knowledge, skills, and a philosophy suitable for living in an age of accelerating change.

In keeping with these purposes, St. Cloud State strives to provide an environment challenging to capable, well-prepared, strongly motivated students and faculty, and to prepare graduates who will:

- (a) continue to learn because they have experienced the excitement of discovery and creativity,
- (b) have an accurate sense of the heritage of Western and non-Western peoples,
- (c) critically appraise their values and the values of society,
- (d) have a personal commitment to serve society,
- (e) be aware of the rapidly changing nature of our world and the need to participate in the decisions required, and,
- (f) be capable of adjusting to changing vocational demands.

In addition, St. Cloud State College strives to serve the region by promoting

cosmopolitan contacts with foreign students and faculty, by providing a program of study of other cultures, and by sharing the resources of the college and the community to meet the varying needs of the area and further enrich its cultural life.

ACCREDITATION AND MEMBERSHIPS

St. Cloud State College is a member of the American Council on Education, of the North Central Association of Colleges and Secondary Schools, the American Association of Colleges for Teacher Education, Council of Graduate Schools in the United

States, and Midwest Council on Graduate Study and Research. It is accredited by the North Central Association of Colleges and Secondary Schools, the National Council for Accreditation of Teacher Education, and the National Association of Schools of Music.

EQUAL OPPORTUNITY

St. Cloud State College is an equal opportunity employer. Through an active and continuing affirmative action program, the college provides equal opportunity and treatment in employment, admissions, and all academic programs.

GENERAL INFORMATION

ACADEMIC YEAR

St. Cloud State College operates on the quarter system offering three equal quarters commencing in the middle of September and concluding early in June.

There are two five-week summer sessions, each offering a broad spectrum of the regular academic year courses. Credits earned during the summer sessions may be applied toward fulfillment of requirements of graduate programs in the same manner, and subject to the same regulations, as credits earned during the academic year.

The Summer Session Bulletin and quarterly program schedules may be obtained by writing the Office of the Vice-President for Academic Affairs.

EVENING CLASSES

St. Cloud State College offers a number of graduate courses on campus during evenings of the regular school year. These courses may be used to satisfy graduate degree requirements.

Each quarter a bulletin listing on-campus evening courses is published. Copies may be obtained by writing the Office of the Vice-President for Academic Affairs.

GRADUATE TUITION AND FEES*

Tuition for on-campus and off-campus courses:

Residents	\$10.25 per quarter credit
**Non-residents	\$20.25 per quarter credit
Minimum tuition	\$15.00

Fees for on-campus courses:

Student Activity fee	
Regular school year (per quarter):	
8 credits or less	\$ 7.50
9 credits or more	\$15.00
Summer sessions (per session):	
4 credits or less	\$ 3.75
5 credits or more	\$ 7.50
Student Union fee	
Regular school year (per quarter):	
8 credits or less	\$ 5.00
9 credits or more	\$10.00
Student Union/Program fee	
Regular school year (per quarter):	
8 credits or less	\$ 1.50
9 credits or more	\$ 3.00
Health Service fee:	
Regular school year (per quarter):	
6 credits or less	\$ 4.00
7 credits or more	\$ 8.00

*Tuition and fees are subject to change by State College Board rulings and by federal price controls.

**A reciprocal agreement regarding in-state tuition fees has been reached with the Wisconsin State University System. Wisconsin residents will be charged in-state tuition fees at St. Cloud State College. The in-state fee assessment for Wisconsin students applies to all of the other State Colleges in the Minnesota State College System.

All students nominated for a graduate assistantship at St. Cloud State College pay in-state graduate tuition fees.

Summer sessions (per session):

4 credits or less	\$ 2.50
5 credits or more	\$ 5.00

Health Service fee

Regular school year (per quarter):

8 credits or less	\$ 3.00
9 credits or more	\$ 6.00

Summer sessions (per session):

4 credits or less	\$ 1.50
5 credits or more	\$ 3.00

Note: There is no reduction in tuition or fees for students who audit courses.

Registration is not considered completed until all fees have been paid. Students who have not completed registration on Registration Day will be assessed a Late Registration Fee of \$5 for the first day, cumulative until registration is completed, at the rate of \$2 for each additional day through the first five class days.

A fee of \$1 is charged students who desire to alter their programs after classes begin. *All fees and regulations are subject to change by ruling of the State College Board.*

PART-TIME EMPLOYMENT

There are many opportunities for students who desire part-time employment. A limited number of these are available on campus. The Office of Financial Aids will assist graduate students who need part-time employment.

Graduate students who carry the full academic load should not plan to devote any time to outside employment. In cases where it is necessary to devote time to outside employment, the student's academic load should be reduced accordingly.

A number of assistantships are available. Interested students should contact the chairman of the major department for further information and details of application requirements. Stipends vary according to percentage of time devoted to the work assignment.

STUDENT LIFE AND DEVELOPMENT

LIVING ACCOMMODATIONS. The Housing Office will assist graduate students in locating suitable housing in the community. It is recommended that arrangements for housing be made well in advance of actual need.

HEALTH SERVICE. Graduate students who pay student activity fees enjoy the same Health Service privileges as the undergraduate students. Preventive and remedial health services are provided. These services include physical examinations, communicable disease control measures, some laboratory services, consultation concerning individual health problems, some hospital and medical care, and health education.

CO-CURRICULAR ACTIVITIES. Graduate students are invited to participate in undergraduate activities (including drama, orchestra, band, and vocal music groups) which do not involve intercollegiate competition.

The College has an Intramural Athletic Department that offers all students opportunities to participate in recreational activities of an athletic nature.

The Concerts and Lectures Committee brings to the campus a variety of entertainment furnished by nationally recognized artists representing music, dance, drama, and lecture. There is usually one such evening program each month throughout the year. The programs are financed by the student activity fee; there is no admission charge.

Opportunities for participation in student activities cover a large area of interest. Graduate students are urged to maintain a well-balanced co-curricular program to supplement their academic endeavors.

GRADUATE STUDY

GENERAL PURPOSES

The program of graduate studies is adapted to the increased maturity, the richer background, the stronger professional motivation, and the greater range of intellectual interests which characterize post-baccalaureate students who are accepted as candidates for the advanced degree at this college. The program is planned cooperatively by learner and teacher and is rooted in the important aspects of study which find focus in the recognition and definition of a problem, gathering of data, and interpretation and application of the learnings secured.

Emphasis is placed on directed reading, techniques of primary investigation, independent and constructive thinking. High standards of performance in the ability to organize and evaluate evidence and defend conclusions are required.

The purposes of graduate study at this college are:

- a. To increase the professional and academic competence of students who show promise of becoming superior workers. The programs are designed to meet the needs of those who wish to continue preparation in their major fields by extending and augmenting their professional and cultural understandings and skills.
- b. For students in professional education programs, to provide for the concentrated study of the more strictly professional phases of preparation for teaching, especially where the undergraduate program did not provide for those phases.
- c. To develop appreciation, attitudes, and understandings characteristic of educated persons.
- d. To provide some preparation and experience in research to the end that sensitivity to change and an attitude of intelligent inquiry may be fostered.

ADMINISTRATION OF THE GRADUATE PROGRAM

Responsibility for the administrative direction of the Graduate Program is delegated by the President of the College to the Graduate Council. The membership of the Graduate Council consists of the President, Vice President for Academic Affairs, the Dean, School of Graduate Studies, and a maximum of 15 members of the Graduate Faculty elected on a prorated basis by the Graduate Faculty members in the Schools of Business, Education, Fine Arts, Industry, and Liberal Arts and Sciences. The Dean, School of Graduate Studies, serves as the executive officer of the Graduate Council.

The Graduate Council serves as the legislative body for the Graduate Program. Specifically, the Graduate Council acts on proposals for graduate course changes; approves all new graduate programs; takes final action of the awarding of the Master's and the Specialist degree; studies the broad aspects of the Graduate Program and effects major changes within the framework defined by the Minnesota State College Board; and, is responsible for the routine administration of the Graduate Program.

The decisions of the Graduate Council are reported to the Graduate Faculty and to the Faculty Senate.

SUMMARY OF GRADUATE PROGRAMS

St. Cloud State College awards the following graduate degrees: Master of Arts, Master of Business Administration, Master of Science, and the Specialist degree. The Fifth Year Program in Teacher Education is also offered.

THE MASTER OF ARTS DEGREE offers the candidate the opportunity to specialize in a particular subject-matter field. It is open to students with undergraduate liberal arts backgrounds as well as students who have completed Teacher Education programs. Programs of studies leading to the Master of Arts degree have been approved for the

following majors: Art, Biology, English, History and Mathematics. Other programs are in the process of development. All Master of Arts programs require a thesis, creative work, or starred papers. Information concerning the program requirements for a particular major may be found with the course offerings for the department.

THE MASTER OF BUSINESS ADMINISTRATION DEGREE program provides opportunity for the advanced specialization in business management so necessary to rapid advancement in executive positions in business, industry, and government. The program is intended to give the student facility with analytical tools, knowledge of the functional areas of business, understanding of the business environment, and opportunity to develop a specialization consistent with his interests. Students may concentrate in accounting, management, finance, insurance and real estate, or marketing. Thesis and non-thesis plans are available. Program requirements may be found on page 29.

THE MASTER OF SCIENCE DEGREE is designed primarily to prepare teachers and school service personnel. Eligibility for these Teacher Education programs is limited to students whose undergraduate preparation qualifies them for teacher certification. In addition, several degree programs have been designed for non-teachers. These are the programs in Employment Counseling, General Counseling, Rehabilitation Counseling, Information Media, and Speech Science, Pathology and Audiology.

Elementary School Teachers. This program is designed to strengthen and broaden the academic and professional preparation of elementary classroom teachers. Students are required to take 24 credits in courses related to teaching in the elementary school, 15 credits in general studies, and the basic research and statistical methods courses. This program is available on both thesis and non-thesis plans. For specific program requirements, consult page 42 of this bulletin.

Junior High School Education. This program is designed for teachers who are or plan to become career junior high school teachers. Special seminars and programs related to the junior high school age students are included. Candidates are required to complete a minimum of 18 credits in subject-matter areas. Two teaching fields are recommended. This program is available on both thesis and non-thesis plans. For specific program requirements, refer to page 44.

Secondary School Teachers. These programs are designed for teachers who desire to pursue specialization in a secondary teaching field. A minimum of an undergraduate minor is required for admission to most of the secondary majors at the graduate level. In some programs an undergraduate major is required for admission. Professional courses in foundations, curriculum and instruction are part of the program. Specialization is offered in the following areas: art, business education, English, geography, health and physical education, history, industrial education, mathematics, music, social science, and physical science. A few of these programs are available under the thesis plan only. For detailed program requirements, consult the course and program listings under the major department.

Elementary and Secondary School Principals. Programs are offered for both the elementary school principal and the secondary school principal. Both programs have been approved by the Minnesota State Department of Education and lead to the Standard Administrator's Certificate. Both thesis and non-thesis plans are available. For program requirements, applicants interested in the elementary school principalship should consult page 37; those interested in the secondary school principalship should refer to page 38.

Information Media (Library and Audiovisual Education). Master's degree and Specialist degree programs are available for holders of all baccalaureate degrees. With the current emphasis on all media formats the graduate program in Information Media has been developed to support persons in media (print and non-print) for all levels of responsibility. Encompassed in the Information Media major are concepts dealing with print (book)

and non-print (audio, projected, and non-projected) materials. Information Media majors should expect to become qualified for one or more of the following positions: Media Generalist, Media Supervisor, Consultant-Director-Supervisor of Academic, Public School, and Special Librarianship; Audiovisual Centers; Instructional Materials Centers; Learning Resources Centers, Curriculum Materials Centers; Information Media Centers and Systems at the Elementary and Secondary school and Junior and Senior college levels as well as Public and Special Libraries. Added information may be found on page 55.

Reading Specialists. In addition to background courses, students enrolled in the program for Reading Specialists are given opportunities to practice in the analysis and correction of reading disabilities under supervised conditions. Successful completion of this program qualifies the person for certification as a remedial reading teacher, developmental reading teacher, or reading consultant. This program is available on both thesis and non-thesis plans. Detailed program requirements may be found on page 43.

Special Education Personnel. The major in Special Education with emphasis in mental retardation, learning disabilities (SLD), or administration is available on both thesis and non-thesis plans. The thesis plan is primarily for students who have already met teacher certification requirements and who desire advanced work. For students who are working for initial certification, the non-thesis plan is recommended. For program requirements, consult page 45.

School Counseling. The School Counseling program meets the basic certification requirements of the Minnesota State Department of Education. Students pursue courses in the various aspects of Guidance and Personnel work. This experience culminates in a supervised practicum in counseling. Available on both thesis and non-thesis plans. Program requirements may be found on page 60.

Employment Counselors. The Public Employment Service provides counseling and other manpower services to the unemployed and/or underemployed. Counseling in this setting is generally of a vocational nature although other psycho-social problems often complicate employability. The program in Employment Counseling provides the necessary qualifications for this service. Available on both thesis and non-thesis plans. For further details, turn to page 61.

Rehabilitation Counselors. The Rehabilitation Counseling program is designed to prepare counselors to assist disabled individuals to the fullest possible mental, social, physical, vocational, and economic restoration. Thesis and non-thesis plans are available. For more detailed information on the program requirements, consult page 61.

General Counselors. The general counseling program is designed to provide an individualized program for students whose needs are less highly specialized. Both the thesis and non-thesis plans are available. For further detailed information, consult page 62.

Speech and Hearing Therapists. This program offers a combination of course work in the basic areas, seminars, clinical practicum, and research to qualify the graduate for the certificate of clinical competence awarded by the American Speech and Hearing Association. Available on Plan A or B. An outline of the program and descriptions of course offerings can be found on page 101.

THE SPECIALIST DEGREE is designed to serve a qualitative need for highly trained specialists in various fields. The emphasis in a Specialist degree program is placed on the development of competencies needed for a specific job category. A program for this degree is designed to meet the needs of students in professional areas where a Master's degree is not sufficient. The program requires one full year of graduate study beyond the Master's degree.

Specialist degree programs are offered by the Department of Library and Audiovisual Education and the Department of Educational Administration. These Specialist degree (6th year) programs are open to the holders of the baccalaureate or master's degree. The

graduate program offered by the Department of Library and Audiovisual Education in Information Media has been developed to support persons in media (print and non-print) for all levels of responsibility. The Specialist degree program offered by the Department of Educational Administration is designed for three distinct groups: the elementary school principal, the secondary school principal including the junior high school principal, and the superintendent of schools.

FIFTH YEAR PROGRAM IN TEACHER EDUCATION. A planned Fifth Year Program is available for those teachers who do not desire to work for a Master's degree or for those who do not otherwise qualify to work for the Master's degree. Through careful advising, it is anticipated that the Fifth Year of work will be integrated with the first four years of the student's preparation. A minimum of 45 credits is required, about one-third of which must be taken at the graduate level. The minimum honor point ratio required for successful completion of this program is 2.25 ("C+"). For further details on the Fifth Year Program, see page 25.

ADMISSION TO GRADUATE STUDY

ADMISSION PROCEDURES

A student who wishes to pursue a program of graduate studies at St. Cloud State College should contact the Dean, School of Graduate Studies, St. Cloud State College, St. Cloud, Minnesota 56301 for application materials. All application materials should be returned to the School of Graduate Studies far enough in advance of the proposed date of registration to allow adequate time for complete processing of the application prior to registration.

The following materials are required:

1. Completed "Application for Admission to Advanced Studies" accompanied by a \$10 non-refundable Matriculation Fee made payable to St. Cloud State College.
2. Recommendations. The Graduate Office will send the required form to the references listed on the application form.
3. Official transcripts. The applicant must have two copies of his official transcripts sent directly to the Office of Graduate Studies by each college or university previously attended. Applicants who apply before receiving the baccalaureate degree will be required to submit supplementary transcripts showing that the degree has been conferred. **Transcripts which the student submits personally are not acceptable** (See Provisional Admission to Graduate School). Graduates of St. Cloud State College are not required to send transcripts of credit earned at this institution.
4. Entrance test scores. Students seeking the Master of Arts and Master of Science degrees are required to take and submit official scores for the **Graduate Record Examination**, Aptitude Test. Advanced tests are required by many major departments. (See Admissions Test Information, page 14). Students seeking the Master of Business Administration degree must take the **Admission Test for Graduate Study in Business**.

When all these materials are complete, the Graduate Office will conduct the initial evaluation. Applicants who satisfy the requirements of the Graduate School will be processed to the appropriate graduate department for their recommendation. Following receipt of the departmental recommendation, the Graduate Office will notify the applicant of the action taken on his application. When an applicant is accepted for graduate study, he will be assigned an adviser by the department. The adviser will help the student formulate a plan of study leading to the accomplishment of the student's objectives in pursuing graduate work.

For additional departmental admission information, students must refer to the appropriate Departmental Requirements and Course Listings.

ADMISSION POLICY

Minimum requirements for admission to the School of Graduate Studies are established by the Graduate Council of St. Cloud State College.

To be considered for admission to a Master's degree program an applicant must have been granted a baccalaureate degree from an accredited college or university and have achieved a "2.6" grade point average over the last two years of undergraduate education (6 full quarters or equivalent) **OR** have achieved an acceptable score on the required entrance examination.

Applicants who hold a baccalaureate degree from an unaccredited college may be considered for acceptance to a Master's degree program. A careful examination of the applicant's previous record and the entrance examination scores will be used as the basis for recommendation for admission. (Applicants who are admitted under these conditions will be re-evaluated upon completion of 12 graduate credits earned at St. Cloud State College).

Applicants who do not meet the standard admission requirements may be permitted to

demonstrate their scholarship and qualify for acceptance by completing a limited program of additional undergraduate course work. Further information pertaining to this alternative may be obtained from the Graduate Office.

To be considered for admission to a Specialist degree, an applicant must have been granted a Master's degree from an accredited college or university, and he must have achieved a "3.0" grade point average over his Master's degree program. In addition, each applicant must furnish test scores on the Graduate Record Examination Aptitude Area and the Advanced Test in Education as well as two official transcripts of his undergraduate and graduate education.

Provisional Admission to Graduate Study. If an applicant is presently in his final stages of undergraduate education and if he has achieved a "3.0" grade point average in the last 96 quarter hours of credit (or equivalent), he may be provisionally accepted into a graduate program prior to being granted an undergraduate degree and/or prior to completion of entrance test requirements. Application blanks for Admission to Graduate Study may be secured upon request by writing to the School of Graduate Study, St. Cloud State College. Two transcripts of the applicant's incomplete undergraduate record must be sent by the undergraduate school. **Final** transcripts must be submitted when the baccalaureate degree is completed. The required entrance test battery (GRE or ATGSB) must be taken prior to or during the first quarter of graduate work taken on this campus.

ADMISSION TEST INFORMATION

Regulations of the Graduate Council require that all students seeking a degree take either the Graduate Record Examination Aptitude Test or the Admission Test for Graduate Study in Business. Many departments also require the Graduate Record Examination Advanced Test in the major field. The following majors require the Advanced Test as indicated:

Major

Biology
Elementary Administration
Elementary Teaching
English
Geography
General School Administration
History
Information Media
Jr. High School Education
Mathematics
Music
Reading Specialist
Secondary Administration

Advanced Test

Biology
Education
Education
Literature in English
Geography
Education
History
Education
Advanced test in academic major
Mathematics
Music
Education
Education

Graduate Record Examinations are scheduled throughout the United States on specified dates (see GRE brochure).

The student should take these tests at least three months prior to the date he intends to begin classes. Pre-registration directly with the Educational Testing Service is required several weeks in advance of test administration dates. Detailed information and registration forms regarding the examination may be obtained from the Graduate Office or from the Educational Testing Service, Box 955, Princeton, New Jersey 08540 or 1947 Center Street, Berkeley, California 94704.

An applicant who has taken the Graduate Record Examination more than five years prior to the date of his application will be required to repeat the examination.

TOEFL: Foreign Students. All foreign students whose native language is other than English must take the "Test of English as a Foreign Language" and request that the score be

sent to the School of Graduate Studies. This score is submitted as evidence of the applicant's ability to utilize English as a language of instruction.

The "Test of English as a Foreign Language" does not replace the "Graduate Record Examination" or the "Admission Test for Graduate Study in Business" entrance tests. The TOEFL is required of all foreign students in addition to the GRE or ATGSB. When requesting information which pertains to the TOEFL, GRE, or the ATGSB, write directly to: Educational Testing Service, Box 955, Princeton, New Jersey, U.S.A. 08540.

Foreign students are required to follow the same procedures for entrance into graduate school as all other applicants. For entrance and admission requirements to a Master's degree program at this college, please read pages 13, 14 and 15 of this bulletin.

REGISTRATION PERMITS

Registration procedures are established by the Registrar's Office and published with the quarter or summer session schedules. In order to register for graduate course work, all students must obtain a graduate permit from the Graduate Studies Office or a Special Student Permit from the Registrar's Office. The permit must be submitted to the Registrar each time the student registers for graduate classes.

Permanent Permit This registration permit will be issued to students who have completed all admission requirements and have been formally admitted to a graduate program. The permit entitles the student to register for all course work in his planned program of studies. Submitted to the Registrar each time the student registers for graduate classes, it will be returned with the registration cards.

Students intending to pursue course work toward a graduate degree who have not completed all admission requirements and who have not been formally accepted into a degree program must register as Special Students subject to all regulations of that category.

Special Student Permit. This is an initial registration permit for students who do not intend to pursue a graduate program at this institution. A maximum of 9 credits earned as a Special Student or the credits completed in the first quarter of registration (whichever is greater) may be transferred to an advanced degree program. Credit is not transferable to a degree program except by meeting all requirements for Admission to Graduate Study and submitting a petition to the Graduate Council. Students with a Special Student Permit will be admitted to classes only after degree students have been accommodated.

Special students are considered to be pursuing post-graduate study and are not classified as graduate students. However, Special Students who have a completed baccalaureate degree may register for graduate-numbered courses.

To obtain a Special Student Permit, contact the Office of Admissions and Records and complete a Special Student application.

Registration by Undergraduate Students. Undergraduate students who are in their last quarter and who have 12 quarter credits or less to complete for graduation from this college, may petition the Graduate Council to enroll in graduate courses for the balance of the normal load. Approval of the petition will be based on the potential admissability of the student to the graduate program. The maximum load permitted is 16 quarter credits of undergraduate and graduate credit combined. Only nine quarter hours of graduate credit earned at St. Cloud State College prior to formal acceptance by the department to a graduate program will be permitted to apply toward completion of a Master's or a Specialist degree.

PROGRAM APPROVAL

Program Approval is required for all Master's and Specialist degree candidates. Students are required to develop a program of studies which must be approved by the student's adviser and the Graduate Dean. Those students writing a thesis or field study must

schedule a preliminary thesis or field study conference to obtain approval of the preliminary research outline.

Program Approval may take place at any time after the student has been admitted to a Graduate Program, but prior to the completion of 24 credits applicable to the graduate program (including transfer credits). Each student must contact the Graduate Studies Office to request the program forms.

To be eligible, the student must have:

1. Satisfied all conditions attached to admission.
2. Satisfactorily completed the departmental examination(s).
(Contact adviser or the Graduate Office to determine if required.)

The Graduate Office will review the student's record to determine his eligibility for an Approved Program according to the criteria listed above, and notify the student's adviser of his status.

APPROVED PROGRAM (Required of Plans A and B). For most Master's degree programs two plans are available, Plan A and Plan B. Under the Plan A program a Master's thesis is required; however, in specific departments, a Creative Work may be completed in lieu of a Master's thesis. Under the Plan B program, additional course work is required and in certain departments starred paper(s) are required. For specific details refer to the section on departmental requirements and course offerings.

All Specialist degree programs require a field study. Students pursuing a Specialist degree are required to file a program of study which shall include credits for a research project. In submitting the Approved Program and arranging for the research conference, students shall follow the regulations in the paragraphs to follow.

The student should develop his proposed program of course work in consultation with his adviser, according to procedures established by the major department. The student should review the program requirements outlined in this bulletin. Upon being approved, all three copies of the program should be returned to the Graduate Office by the adviser.

The Dean, School of Graduate Studies, will review the proposed program and give final approval. In cases where changes are required, before final approval is given, the Dean will consult with the adviser and the student.

Once the program has been approved, any deviation from it must receive **prior** approval of the adviser and the Graduate Dean through the petition process. These petitions for change are available in the Graduate Studies Office and must be submitted via their adviser to the Graduate Studies Office.

When the student's Approved Program is given final approval, he will receive notification that it meets the requirements established for the Master's or Specialist degree program.

THESIS OR FIELD STUDY CONFERENCE. Students on Plan A (thesis) or the Specialist degree program must arrange for a preliminary thesis or field study conference. This conference may be scheduled at any time after the student has been fully accepted into a graduate program, but at least one quarter prior to the Final Oral Examination. The student should prepare, in consultation with his adviser, an outline of his proposed thesis or field study. The student should then request that a conference be scheduled by the Graduate Office.

The student shall prepare five copies of the preliminary research outline for presentation to the Graduate Office two weeks prior to the time requested for the research conference. The student's adviser, one other Graduate Faculty member from the major department, and one other Graduate Faculty member from a related field shall comprise the faculty representation.

Preparation of Thesis or Field Study. The following general regulations govern the preparation of a thesis or a field study:

1. The Master's thesis or the field study for the Specialist degree shall be carried out

under the supervision of the research committee, appointed at the preliminary research conference, and consisting of the student's adviser, a Graduate Faculty member from the major department, and another Graduate Faculty member from a related department chosen on the basis of his potential advisory value in the area of the research undertaken. This committee shall comprise the membership of the student's Final Evaluation Committee.

2. The student will register for Master's thesis or field study in the same manner as he registers for classwork; however, the credits for thesis or field study may be spread over more than one registration period.
3. The satisfactory completion of the research will be reported as "S" (satisfactory). If all requirements for the research have not been met by the end of the quarter or session in which it was registered, the work will be reported as "In Progress." The Master's thesis must be completed within the 7-year time limit set for the completion of the Master's degree. The field study must be completed within the 5-year time limit set for the completion of the Specialist degree.
4. The original and three copies of the thesis or field study shall be filed with the Graduate Office no later than 2 weeks before the completion of the work for the appropriate degree, but before the material is submitted, it must have the approval of the respective committee. When the final evaluation committee has approved the research in its final form, the original and three copies shall be submitted to the Graduate Office for binding. All copies shall be bound in black buckram covers, and the title shall be printed in gold lettering on the front cover and back edge.
5. Seven copies of an abstract of not more than 400 words shall be submitted to the Graduate Studies Office; the abstract shall include the signature of the committee indicating their approval before it is submitted to the Graduate Studies Office. All abstracts are reprinted and submitted for publication, and therefore, must follow the style sheet of St. Cloud State College which is available upon request in the Graduate Studies Office.
6. Standards for the preparation of theses, starred papers, creative works, and field studies for the Specialist degree are those published by the Graduate Studies Office, "A Manual for the Preparation of Theses, Starred Papers, Creative Works, and Field Studies," and those embodied in "Form and Style in Thesis Writing" written by William G. Campbell and published by Houghton Mifflin (1969, Third Edition), unless otherwise specified by the department and approved by the Graduate Studies Office. When a conflict exists in standards, format, or style, the manual published by the Graduate Studies Office will take precedence over any other manual approved for department use.
7. The student should contact the Graduate Studies Office to obtain "A Manual for the Preparation of Theses, Starred Papers, Creative Works, and Field Studies." This manual provides detailed information and instructions.

FINAL EVALUATION PROCEDURE. The candidate for the Master's and Specialist degree shall take the final evaluation during the last quarter of his graduate program. He shall not be permitted to take the final examination if he has less than a "B" average in his major and in the total program.

All candidates on thesis and Specialist degree programs are required to pass a final oral examination. In addition, some departments require a written comprehensive examination which must be taken at least one week prior to the final oral examination. All candidates on non-thesis plans are required to pass a final written comprehensive examination.

Final Oral Examination. At least three weeks prior to the close of the quarter in which he intends to graduate, the student must request the Graduate Office to schedule a final oral examination. At this time he must submit the original and three copies of the thesis or the field study.

The final oral examination is conducted by the final evaluation committee, consisting of three members. Membership shall consist of adviser, another Graduate Faculty member

from the major department, and one Graduate Faculty member appointed at large. A majority vote of the final evaluation committee is required to pass the oral examination. All Final Evaluation Conferences are open.

Candidates completing a Plan B Master's degree program which requires the submission of starred papers must pass a final oral examination in accordance with the procedures described in the paragraphs above. The final oral examination is based on the starred papers written in conjunction with courses approved in the student's major area of concentration. At the option of the department, candidates also may be required to complete a final written examination.

Written Comprehensive Examination. Candidates for the Master's degree under Plan B are required to pass a final written comprehensive examination based on the major. This examination is developed, administered, and evaluated by members of the staff responsible for the major program. The candidate must notify his adviser of his intention to take the final written comprehensive examination at the beginning of the quarter in which he intends to complete the degree requirements. The candidate's adviser is chairman of this examination committee, which is appointed by the department chairman, and which shall consist of at least three members. A majority vote of the examining committee is required to pass the written comprehensive examination. A candidate who fails in his first attempt may, with the approval of his adviser, take the examination a second time, but the candidate may not re-take the examination during the same quarter or summer session in which he failed it. A third chance to pass the examination shall not be permitted.

STARRED PAPERS. Certain Plan B programs require that starred paper(s) be written in conjunction with approved graduate courses in the student's major area of concentration. These courses must be identified on the Approved Program forms. The original and three copies of each starred paper must be submitted to the Graduate Studies Office at least three weeks prior to the end of the quarter or session the student plans to graduate. These papers are submitted to the examining committee and form the primary basis for the final oral examination. (There is no separate registration for starred papers). At the option of the department, candidates also may be required to complete a final written examination.

The final oral examination must be held prior to final examination week. As with the thesis, the examining committee is composed of the student's major adviser, another departmental member, and a third member from a related field. When the starred papers have been approved and signed by the evaluation committee, they shall be filed with the Graduate Studies Office for binding and distribution.

Prior to typing the starred papers, the student should contact the Graduate Studies Office for detailed instructions for the preparation and filing of these papers.

CREATIVE WORK

Statement of Qualifications. A student interested in completing creative work (in lieu of the traditional Master's degree thesis or as may be required by a specific department) must show evidence of his creative ability before being accepted as a candidate for the advanced degree. This evidence submitted by the students from the Departments of Art, English, Music and Theatre (creative projects, play-writing, performance or production, etc.) must be presented to a designated committee for their critical review and approval. In certain areas of the fine arts, a student may be required to produce evidence of his creative skill by submitting critical reviews, letters of recommendation, and/or demonstration(s). For further information, contact the appropriate department chairman.

Qualifying Conference. A qualifying conference is held prior to the student's registering for the final fifteen (15) credits of work. The purpose of the conference is to serve as an evaluation of the creative work accomplished prior to the time of the conference and to provide direction for the final creative work.

Registration for Creative Work. The student will register for Creative Work (698) in the same manner as he registers for course work. These credits, however, may be earned over more than one registration period.

Arrangements for the Final Evaluation Conference. Arrangements for the final evaluation conference must be made through the Graduate Studies Office. The final evaluation conference must take place during the last quarter or session of the student's graduate program. The original and three copies of the creative work must be submitted to the Graduate Studies Office at least two weeks prior to the date of the final evaluation conference. Final evaluation conferences are not scheduled during final test week.

Submission of Final Work. Four copies of the final creative work must be submitted to the Graduate Studies Office and approved for binding. This creative work includes a written statement of artistic intent and such supporting materials as are applicable. Other than form and style of the text, the binding of the contents of the creative work shall be in accordance with standard thesis requirements.

The statement of artistic intent may contain such information as a description of the work undertaken, the technique(s) involved in the work, and related subject matter. This information and data shall be approved, bound, and placed on file as described in, "A Manual for the Preparation of Theses, Starred Papers, and Creative Works" which is available in the Graduate Studies Office.

Final Evaluation Committee. The final evaluation committee shall consist of three (3) members who shall judge the artistic merits of the creative work. Membership shall consist of two graduate faculty members from the appropriate department and an artist or authority selected from outside the college. Before an artist or consultant from outside the college is selected as a committee member, the Graduate Studies Office must grant approval. Approval must be obtained at least thirty (30) days in advance of the final evaluation conference. A form for this purpose is available in the Graduate Studies Office.

A fourth voting member may be selected from another department within the college if deemed appropriate by the major adviser and/or the Graduate Dean.

The members of the final evaluation committee must sign the approval page to indicate their acceptance of the creative work.

When the final evaluation conference is completed, a final written statement including individual comments pertaining to the evaluation of the creative work shall be placed in the permanent file of the graduate student in the Graduate Studies Office. The final statement of evaluation must be signed by the chairman of the Final Evaluation Committee, and registered with the Graduate Studies Office not later than the date of the official closing of the college quarter or session as shown in the Graduate Bulletin.

GRADUATION

APPLICATION FOR GRADUATION. A candidate for the Master's or the Specialist degree must file an Application for Graduation with the Dean, School of Graduate Studies, at the beginning of the quarter or session during which he plans to complete work for the degree. In addition, the degree candidate must arrange to have a Certificate of Readiness for Graduation filed in his behalf by his adviser.

Candidates completing a Plan B Master's degree program which requires the submission of starred papers should refer to paragraph three (3) under final oral examination.

SUMMARY OF REQUIREMENTS FOR GRADUATION. It is the responsibility of the Graduate Dean to certify that a student has met all the following requirements for the degree sought.

1. Application for graduation at the beginning of the quarter which the degree is to be granted.
2. The student must have satisfactorily completed all courses as required in his approved program. All changes must be substantiated by an approved petition.
3. He must have maintained a "B" (3.0) average in his major and in his total course work. For the Specialist degree in Educational Administration, a grade point average of 3.25 is required over the course work taken in the Specialist degree program.

4. He must have satisfactorily completed the required final examination(s), written, oral, or both.
5. Students completing a thesis or field study must have submitted the original and three approved copies to the Graduate Office for binding. A total of seven abstracts including the original must have been submitted.

CONFERRING OF DEGREES. Degrees are conferred and commencement exercises held at the close of each quarter (except Summer Session I). While attendance at these exercises is not compulsory, students are urged to participate. Students will receive instructions from the Academic Affairs Office.

ACADEMIC REGULATIONS

MASTER'S THESIS AND FIELD STUDY. Graduate students are expected to be able to (1) define problem areas; (2) locate and identify material relevant to the problem; (3) interpret and evaluate the materials; and, (4) report the findings in a logical and intelligible form.

Students enrolled in Plan A of the Master of Arts, the Master of Science, and the Master of Business Administration programs will show evidence of the mastery of these skills by the completion of a Master's thesis. A student whose Master's degree program requires completion of a thesis must earn a minimum of 45 credits including 3-9 hours of thesis credit. For a complete outline of course requirements and thesis option, consult the program description listed under the major department.

Students enrolled in the Specialist degree program must show evidence of the mastery of research skills by the completion of a field study approved by the appropriate graduate committee. Two to twelve credits may be earned in a field study towards fulfillment of the Specialist degree requirements in the Information Media program and three to nine credits in the Educational Administration program.

ALTERNATE PLAN (Plan B). Many departments offer a non-thesis option for the Master's degree. Where departmental requirements permit, the student may select either the thesis or non-thesis plan, subject to approval by the major department. Plan B students must earn a minimum of 48 credits in graduate-level course work.

CREATIVE WORK. A student who is interested in completing creative work (in lieu of the traditional Master's degree thesis) must show evidence of his creative ability before being accepted as a candidate for the advanced degree. In certain areas of the fine arts, a student may be required to produce evidence of his creative skill by submitting critical reviews, letters of recommendations, and/or demonstration(s). For further information, contact the appropriate department chairman.

STARRED PAPER(S) are required in certain academic areas under Plan B. These paper(s) are written in conjunction with approved courses or as the content of a course or courses in the major area of concentration. These paper(s) must be approved by the major adviser and will form the primary basis for the final evaluation conference. For a complete outline of course requirements, consult the program requirements under the major department or contact the appropriate department chairman.

COURSE LOAD. The normal student load is 12 credits per quarter for the regular year. A student may be permitted to carry a maximum load of 16 quarter hours. Requests for permission to carry loads in excess of 16 credits per quarter will not be approved.

During the Summer Quarter (two sessions), the normal load is also 12 quarter hours. The maximum credits which can be earned in both sessions is 16 quarter hours. The maximum load in any one session is 9 quarter hours.

TRANSFER POLICY. St. Cloud State College will allow the transfer of a maximum of 15 quarter hours of graduate work completed at other accredited colleges and universities or extension credit earned from this college. To be considered for transfer, the credits must have been earned at an institution approved to give graduate work at the time the credit was earned, must be appropriate to the student's program, and the mark earned must be "B" or better. No transfer credit shall be accepted that was earned more than seven years prior to completion of the degree.

When transferring credit to a Specialist degree program, a minimum of 30 of the last 45 credits must be taken at this institution.

After the student's program of study has been accepted for the Master's or Specialist degree, no additional transfer credits will be accepted unless the student has received prior approval via the petition process.

CORRESPONDENCE COURSES. Graduate correspondence courses are not offered by St. Cloud State College. Graduate credit will not be transferred when earned through correspondence.

CREDIT EARNED BEFORE ADMISSION. Only 9 quarter hours of graduate credit earned at St. Cloud State College prior to formal acceptance by the department to a graduate program, or the credits completed in the first quarter of registration (whichever is greater) will be permitted to apply toward completion of a Master's or Specialist degree. (Credits earned the first and second Summer Session are considered as one quarter of graduate work.) In unusual circumstances, credit earned in excess of these figures may be approved by petition to the Graduate Council.

FIELD TRIPS. No more than 9 credits earned by field trips may be counted toward completion of a Master's degree.

GRADUATE ONLY COURSE WORK. Students pursuing a Master's degree must earn a minimum of 15 graduate only credits in their major field of concentration.

TIME LIMIT. All credits (including transfer credits) used in meeting requirements for the Master's degree must be earned within 7 years prior to the awarding of the degree.

All credits used in meeting the requirements for the Specialist degree must be completed within a 5-year period.

RESIDENCE REQUIREMENT. Candidates for the Master's or Specialist degree must earn a minimum of 30 quarter hours in on-campus classes (day and night combined). Courses offered at graduate study centers established by the college are considered on-campus credit.

Individual departments may establish residence policies requiring a period of full-time study. Each student should consult with the major department to determine specific departmental requirements.

MARKS. The following marks are used in reporting the achievement of graduate students at this institution: **A** (excellent), **B** (good), **C** (acceptable), and **D** (unsatisfactory). **S** (satisfactory) and **U** (unsatisfactory) are used for certain specialized courses in which a more precise mark is not deemed appropriate. Other non-credit marks which are recorded on official transcripts include: **I** (incomplete), **V** (audit), **W** (withdrawn), and **X** (in progress).

When the student has completed all of the requirements for the Master's thesis, Creative Work or the Specialist degree field study, his adviser will submit a mark of "**S**" (satisfactory). Courses not completed during the regularly scheduled period will be recorded as "Incomplete." Such "Incomplete" must be removed by the student within a quarter in order to receive credit for the course; if "Incomplete" is not removed, a grade of "**D**" will be recorded.

If the student has not met all of the requirements of the Master's thesis or the Specialist degree field study by the end of the quarter or session in which it was registered, the research will be reported as "X" (In Progress). The Master's thesis must be completed within the 7-year time limit set for the completion of the Master's degree. The field study must be completed within the 5-year time limitation set for the Specialist degree program.

Graduate students, accepted as candidates for the Master's or Specialist degree, whose records show less than a "B" average at the completion of the approved program of courses may be permitted to register for a maximum of 8 additional quarter hour credits to be earned in courses approved by the Graduate Council. If, after the completion of these 8 additional credits, the student has less than a "B" average, he will be denied further registration at the graduate level.

STANDARD OF SCHOLARSHIP. Candidates for the Master's degree must maintain a "B" average in both the major field and the total program. Candidates for the Specialist degree in Information Media must maintain a "B" average in both the major field and the total program. Candidates for the Specialist degree in Educational Administration must earn a 3.25 grade point average over the course work taken in the Specialist degree program. Courses in which a mark of "D" was earned will not be accepted for graduate credit; however, the honor point deficiency created by such marks must be made up by marks of "A" in other courses. If a course is repeated, both marks are used in determining the total scholarship average.

The marks for all courses taken at the graduate level at this college are included within the scholarship average is calculated.

Students may not apply for program approval before a "B" average has been achieved in both the major and in all graduate work taken at this institution.

Students who have less than a "B" average in the major and/or the total program will not be permitted to take the final oral or written comprehensive examinations.

Marks earned in courses accepted in transfer are not included in the calculation of the scholarship average.

The Graduate Council may refuse further registration on the basis of unsatisfactory scholarship.

DROP POLICY

Regular Quarter. A student may change his program prior to the start of classes. These withdrawals will not be recorded on the student's record.

For the first twenty-one calendar days of the quarter, a student may withdraw with a mark of "W". After twenty-one calendar days, students who withdraw from a class will receive a mark of "D" except when the withdrawal is due to circumstances beyond his control. In such situations, the Graduate Studies Office may approve a mark of "W".

Summer Sessions. A student may change his program prior to the start of classes. These withdrawals will not be recorded on the student's record.

For the first eleven calendar days of the session, a student may withdraw with a mark of "W". After the eleventh calendar day, students who withdraw from a class will receive a mark of "D" except when the withdrawal is due to circumstances beyond his control. In such situations the Graduate Studies Office may approve a mark of "W".

COURSE NUMBERING SYSTEM. Courses numbered from 500-699 may be used to satisfy the requirements of graduate degrees. Many courses carry double numbers, e.g. 450-550. These courses are open to advanced undergraduate and to graduate students. To receive graduate credit, the student must register for the 500 number. Courses open only to graduate students are numbered 600-699.

AUDITORS. Auditors may enroll for courses by securing the permission of the instructor of the course and the Dean, School of Graduate Studies. Auditors pay the regular fees.

Auditors are not permitted to take the course examinations nor will they be given credit for the courses audited.

GENERAL STUDIES CORE. Most Master of Science degree programs require 9 credits in General Studies. All General Studies courses must be selected from disciplines other than the undergraduate major or minor, the graduate major and professional education.

- A. A minimum of 6 credits must be taken in the following General Studies Core:
- Biology 602 Modern Biological Concepts, 3 credits.
 - Business Education 607 Business for General Education, 3 credits.
 - Chemistry 601 (Physics 601) Major Developments in Physical Science, 3 credits.
 - Education 628 School and the Social Order, 3 credits.
 - English 696 Literary Heritage, 3 credits.
 - Industrial Education 601 Technology and Man, 3 credits.
 - Information Media 604 Information Media in Society, 3 credits.
 - Music 623 Music in Western Civilization, 3 credits.
 - Philosophy 542 History of American Philosophical Thought, 4 credits.
 - Psychology 621 Psychology in Human Affairs, 3 credits.
 - Social Science 630 Problems in the Social Sciences, 3 credits.
- B. If the student elects to take the additional 3 credits in an area outside the General Studies Core, the course must be selected from disciplines other than the undergraduate major or minor, the graduate major, and professional education.

SUMMARY OF REQUIREMENTS FOR THE MASTER'S DEGREE

Procedure	Under Direction of	To be Completed
Application for Admission to Graduate Study. Student submits application form, matriculation fee, transcripts, and entrance test scores to	Graduate Studies Office	One quarter prior to first registration.
Appointment of adviser by	Department Chairman	Upon acceptance into major program.
Registration with approval of	Adviser	Prior to each registration.
Program Approval. Student requests approved program cards and instruction sheet from	Graduate Studies Office	Upon satisfactory completion of 0-24 credits at St. Cloud State College.
Develop program in consultation with	Adviser	As part of Program Approval procedure.
Thesis (Plan A only) or field study conference. Student develops thesis or field study outline and requests preliminary conference through	Graduate Studies Office	After the student has been fully admitted to Graduate School.
Notification of Program Approval. By Graduate Studies Office upon receipt of a program developed in consultation with and approved by the	Adviser	When the program is given final approval by the Graduate Studies Office.

Procedure	Under Direction of	To be Completed
Completion of Master's thesis or a field study under the direction of.	Adviser	After approval of thesis or field study plan at the preliminary research conference.
Application for Graduation. Student submits application forms to the	Graduate Studies Office	At the beginning of the last quarter or session.
Complete language requirements if applicable, by submitting appropriate evidence to the	Adviser	Prior to taking the final exam.
Submit thesis or field study to	Graduate Studies Office	Not later than two weeks before the final oral exam.
Final oral examination (Plan A; Plan B, starred papers; creative work or field study.) Make applications with	Graduate Studies Office	Not later than three weeks before graduation.
Submit thesis, field study or Plan B starred papers for binding. Student registers thesis, field study or starred papers at	Graduate Studies Office	Prior to graduation.
Final written comprehensive examination (Plan B). Make application with the	Adviser	At the beginning of the final quarter.
Commencement exercises Information will be distributed to all applicants each quarter by the	Vice-President for Academic Affairs	For participation in quarterly graduation exercises.

THE FIFTH YEAR PROGRAM IN TEACHER EDUCATION

The Fifth Year Program in Teacher Education is intended to provide a systematic basis for study beyond the baccalaureate degree for teachers who do not plan to qualify for a Master's degree. Work included in the Fifth Year Program is selected to strengthen the student primarily in the area taught. A person who has less than an undergraduate minor may not choose that field for his fifth year major. As nearly as possible, a student's Fifth Year Program will be planned to provide an integrated five-year program of preparation for teaching. The Fifth Year Program is available in nearly all teaching fields.

ADMISSION. Students seeking admission to the Fifth Year Program must complete the application form and submit it to the Graduate Studies Office. They must also make arrangements to have two official copies of the undergraduate transcript sent from the college where the work was completed to the Graduate Studies Office. All transfer work must be substantiated by two copies of official transcripts sent from the college where the work was taken.

An applicant will be granted admission to the Fifth Year Program if he holds a baccalaureate degree in teacher education from a college or university accredited by the National Council for Accreditation of Teacher Education, or the appropriate regional accrediting agency, or from a college recognized by the state university of the state in which the college or university is located.

If the applicant holds a baccalaureate degree from an unaccredited institution, he will be admitted to the Fifth Year Program after (1) he produces evidence that he holds a valid teacher's certificate in the state where he teaches and (2) he completes 15 quarter hours of creditable work at this college.

Upon formal admission to the program, the student will be assigned an adviser. The adviser will assist the student in planning a program that has clear relevance to his professional goals.

PLANNING THE FIFTH YEAR PROGRAM. Before a student has completed 16 quarter hours of his Fifth Year Program, he must, with counsel from his adviser, outline the courses that he plans to take to complete the Fifth Year Program requirements. The student may obtain the necessary forms from the Graduate Studies Office or his adviser. The program forms must be prepared in triplicate. After the adviser has endorsed each of the three copies, he will send them to the Graduate Studies Office for processing and distribution. One copy will be placed in the applicant's file in the Graduate Studies Office; one copy will be returned to the adviser; and the third copy will be sent to the applicant. Any subsequent changes in the applicant's Fifth Year Program must have the prior approval of his adviser and the Dean, School of Graduate Studies via the petition process.

REQUIREMENTS FOR THE FIFTH YEAR PROGRAM

In order to complete the Fifth Year Program, the candidate must have met the following requirements:

1. He must have earned a minimum of 45 quarter hours of creditable work; in secondary school programs, 15 of these credits must have been taken in courses open only to graduate students; in elementary school programs, 15 of these credits must have been taken at the graduate level.
 - a. He must have earned a minimum of 32 quarter hours in his major and related areas.
 - b. He must have earned a minimum of 8 quarter hours in Professional Education.

- c. He must have taken Ed. 614 Interpretation of Research, 3 credits, or Ed. 615 Introduction to Research, 3 credits.
2. At the beginning of the session or quarter when he plans to complete his work, he must file a Certificate of Readiness for Fifth Year Program completion with the Dean, School of Graduate Studies; this certificate must have the approval of the adviser.

CREDITS APPLICABLE. Of the 45 credits required to complete the program, a minimum of 30 credits, including the last 8, must be earned in residence at St. Cloud State College.

A maximum of **15** quarter hour credits of "**C**" or better will be accepted in any one or a combination of the following categories:

- I. Transfer Credits from Accredited Colleges or Universities.
 - A. Graduate credits.
 - B. Advanced undergraduate credits earned after the granting of the Bachelor's degree.
- II. Special Areas.

From St. Cloud State College or other accredited colleges or universities:

 - A. Extension, TV, and Correspondence:

No more than nine (9) quarter hours credit will be accepted in this category.
 - B. Tours:

No more than nine (9) quarter hours credit will be accepted in this category.

COURSE LOAD. The maximum load for Fifth Year Program students is 16 quarter hours per quarter and 8 quarter hours per summer session.

COURSE NUMBERING SYSTEM. Courses numbered in the 300, 400, 500, and 600 series are creditable in the Fifth Year Program. Courses carrying numbers in the 100's and 200's may not be included in this program.

FEES. Students enrolled in the Fifth Year Program will pay undergraduate fees when they enroll in undergraduate (300- and 400-numbered) courses and graduate fees when they enroll in 500- or 600-numbered courses.

MARKS. The academic achievement of students is recorded by the following system of marks: **A** (excellent), **B** (good), **C** (average), **D** (not acceptable), and **E** (failing). The mark "**X**" is given during the early quarter or quarters of a course which must be taken in a series of more than one quarter or sessions before any credit is earned. "**S**" means satisfactory performance in courses for which no more precise mark is generally available. "**U**" means unsatisfactory. Courses not completed during the regularly scheduled period will be recorded as "**I**" Incomplete. Such incompletes must be removed by students within the next quarter in order to receive credit for the course. For auditing, the mark recorded will be "**V**".

STANDARD OF SCHOLARSHIP. Candidates for the Fifth Year Program must maintain an honor point ratio of at least 2.25 in the major and in the total program.

Courses in which a mark of "**D**" or "**E**" was earned will not be credited toward completion of the Fifth Year Program.

A Fifth Year student may repeat one time a course which he failed or in which he received a "**D**". When a course is repeated, both the old and the new marks will appear on his record. Both marks earned will be used in computing the honor point ratio.

Only courses taken at St. Cloud State College are used in computing the honor point ratio.

TIME LIMIT. All credits used in completing the Fifth Year Program must be earned within 10 years of the completion of the program.

COMPLETION OF THE FIFTH YEAR PROGRAM. The satisfactory completion of an approved Fifth Year Program in Teacher Education is verified by an appropriate statement on the transcript.

ALL-COLLEGE COURSES

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

CREDIT BY ARRANGEMENT

In special situations, it is possible for students to register for courses which are not included in the quarterly class schedule. With the approval of the instructor, adviser, and department chairman, the student may register for course work using the "Credit by Arrangement" procedure. Arrangements for completing requirements for these courses are developed in consultation with the instructor assigned.

It is also possible for students to apply 300 or 400 level courses to a graduate program by registering for an all-college course number (Name of Department or Program) 501.

1. To be eligible to register for a 501 Credit by Arrangement, the student must have filed and received formal approval of the program forms or the student must have received prior approval by formal action on a petition.

2. A maximum of 9 credits earned under the 501 course number may be applied to a Master's degree program.

EDUCATIONAL TOURS

(Name of Department or Program) **510 Educational Tours**. Tours taken under supervision of the College. Exact nature of course will be defined by the department or program involved, subject to approval of the administration. 1-8 credits.

EDUCATIONAL TELEVISION

(Name of Department or Program) **588 (Special title for each offering)**. Television courses offered under supervision of the college. Exact nature of course is defined by the department or program offering it, subject to approval of the administration. 2-4 credits.

EXPERIMENTAL COURSES

Departments may offer graduate courses without prior approval of the Graduate Council for a period not to exceed two calendar years in order to experiment with innovative methods or content or to take advantage of visiting staff. Proposals for these courses must contain a syllabus with a title and description for the student's record and be approved by the Dean of the School in which they are to be offered, the Graduate Dean, and by the Vice President for Academic Affairs. The department must initiate formal approval by the Graduate Council not later than the end of the first calendar year in order for the second calendar year to be allowed.

Double-numbered courses are assigned numbers by the department from those available at the 400-500 level. "Graduate only" courses are assigned numbers from the block set aside for this purpose.

(Name of Department or Program) **690-694. Selected Topics in (Name of Department or Program)**: (Select special title for each offering). 1-4 credits.

INDEPENDENT STUDY

600. Special Problems. Independent study for advanced students wishing to work out a special problem in the major area of concentration. A maximum of four credits will be permitted on a graduate degree program. 1-4 credits.

WORKSHOPS

(Name of Department or Program) **595 and 695 (Special title for each offering)**. Area limited and specific subjects selected before workshop is announced. 2-8 credits.

SCHOOL OF BUSINESS

James G. Marmas, Dean

Chairman: Robin Peterson, MBA Committee

Chairman: Harry Olson, MS Committee

MASTER OF BUSINESS ADMINISTRATION

The applicant for admission to the Master of Business Admission program must meet the following requirements:

1. A baccalaureate degree from an accredited college or university.
2. An acceptable score on the Admission Test for Graduate Study in Business (ATGSB).
3. Undergraduate scholarship.
4. Demonstration of evidence of aptitude for successful graduate business study.

Admission is competitive and selection is based on an evaluation of the total factors.

Information about the ATGSB can be obtained at the Graduate Studies Office.

The candidate for the Master of Business Administration degree must satisfy the requirements for all Master's degree programs as described on page 19.

A minimum of 43 credits is required for the MBA degree.

A maximum of eight (8) graduate credits taken as a special student may be accepted by the MBA committee as applying to the degree.

Phase I — MBA

MBA applicants accepted into the program must have completed the *equivalent* of the following *before* starting Phase II Graduate courses:

Acct. 285. Financial Control. External and internal financial reporting systems and their role in planning, control, and evaluation of management action. 4 credits.

Mgt. 371. Managerial Finance. Financial analysis and methods involved for financing various enterprises. 4 credits.

Mgt. 363. Production Management. Transformation of inputs (material-labor-management- capital) into outputs (goods and services) in manufacturing organizations; management, design, analysis, and control of production systems. 4 credits.

Mktg. 320. Principles of Marketing. Analysis, planning and control of marketing functions viewed as a total operating system. Perceiving the firm as a totally functioning entity. 4 credits.

Econ. 377. Business Economics. The relevance of economic analysis to business decision-making. Demand, cost, capital and profit analysis and the theory of the firm. 4 credits.

Mgt. 369. Management of Organizations. An analysis and integration of organizational relationship concepts as they relate to organization change. These organizational relationship theories will be applied to specific cases in order to develop awareness of their overall impact on individual behavior and organization. 4 credits.

Mktg. 242. Quantitative Analysis for Business. Selected topics from the quantitative methods area with major emphasis on application in business. 4 credits.

Mktg. 441. Operation Research. Deterministic models such as assignment problems, transportation problems, traveling salesman problems, linear programming, dynamic programming and inventory models. 4 credits.

Mktg. 250. Data Processing. The role of the computer in information processing; components of a computerized business information center; manipulating, storing, and transmitting computerized information; tools for analysis and planning computer programs; introduction to procedure-oriented languages; and programming projects. 4 credits.

Courses used to satisfy Phase I requirements may not be used to reduce the course requirements under Phase II. A "B" average is required for course work taken in Phase I.

Phase II — MBA

1. The following 40 quarter credits must be completed by all MBA students.

MBA 632. Decision Making Techniques. Theory of business decision making and application of analytical tools to business problems. 4 credits.

MBA 684. Corporate Financial Reporting. Accounting systems and their role in the valuation of assets, the determination of income, and the measurement of equities. Concentration is on the interpretation of published accounting statements. 4 credits.

MBA 683. Managerial Accounting. Managerial accounting reports as an aid to the decision making process. Areas covered include the development of cost functions, cost-volume-profit relationship, performance measurement and evaluation and the allocation of scarce resources problem. 4 credits.

Econ. 677. Business Economics. Economic analysis as an aid in business management and control. 4 credits.

MBA 629. Marketing Plans and Decision Making. Analysis and planning for decision making in marketing. The development of consumer oriented policy in the areas of product, price, logistics, and promotion. 4 credits.

MBA 663. Production and Operations Management. Case studies of companies from selected industries that emphasize the direction of operating systems comprising men, material, facilities and information that create goods and/or services. 4 credits.

MBA 671. Financial Management Policy. Analysis of the problems confronting corporate financial management in forecasting financial requirements under uncertainty. 4 credits.

MBA 673. Management of Human Resources. An analysis of principles applicable to problems arising out of individual and group employment relations. Theories of selecting, developing, motivating, and accounting for human resources will be discussed and illustrated with cases. 4 credits.

MBA 634. Legal and Social Foundations of Business. Case study of business as it is affected by law and social pressures and needs.

MBA 670. Corporate Strategies. Advanced analysis, case studies and outside readings in contemporary management problems. 4 credits.

II. In addition to the required courses outlined above, the candidate must elect with the adviser's approval 8 quarter graduate credits. The candidate *may* use these electives to develop a concentration in one or more of the following areas:

- | | |
|---------------|-------------------------------|
| 1. Accounting | 5. Quantitative methods |
| 2. Management | and Information Systems |
| 3. Finance | 6. Economics |
| 4. Marketing | 7. Psychological Measurement |
| | 8. Sociology and Anthropology |

The MBA program will require graduate students to complete a minimum of 48 quarter credit hours.

MASTER OF SCIENCE — Business Education

For details of this program refer to Department of Business Education and Office Administration, page 31.

ACCOUNTING

Chairman, Mohamed Heikal

Graduate Faculty: Heikal, D. Lu.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

581. Advanced Accounting I. Theory and practice of accounting for partnerships; joint venture; business combinations; parents and subsidiary accounting through consoli-

dated balance sheets, income statements and retained earnings. Prerequisite: Accounting 382. 4 credits.

582. Advanced Accounting II. Accounting for installment sales, consignments, home office and branch, statement of affairs, receiverships, statement of realization and liquidation, estates and trusts, governmental and institutional units and actuarial methods. 4 credits.

584. Accounting Theory. Accounting function, the basic concepts and principles underlying accounting theory as they relate to asset valuation and income determination. 4 credits.

585. Advanced Income Tax. Federal income taxation of partnerships, corporations, trusts, and estates; Federal estate and gift taxation. Emphasis is placed on tax planning and tax research. Prerequisite: Accounting 480. 4 credits.

586. Auditing Theory. Nature of the audit function; nature of the audit evidence, basic audit techniques; audit standards; professional ethics; and audit reports. 4 credits.

587. Auditing Problems and Cases. Application of the auditing standards and techniques in the verification of financial statements and preparation of audit reports. 4 credits.

588. Accounting Systems. System planning, design, and applications. Emphasis is placed on the interaction of computers and accounting in the development of management information systems. Prerequisite: Marketing 350. 4 credits.

589. Controllership. Case analysis of the coordinating and administrative functions of the controller. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar-Accounting. Selected topics related to accounting theory and practice. Approval of the department chairman required. 4 credits.

680. Special Research. A research seminar for MBA students with non-thesis plan. 1-4 credits.

681. Income Determination Theory. The evolution of accounting thought as it relates to income determination, i.e. the balance sheet, the service, the value, and the information theory approaches. 4 credits.

682. Cost Accounting Theory. Cost accounting concepts and techniques. Emphasis is focused on the goals of the firm and the possible aid in achieving these goals through cost control, cost analysis, budgets, and forecasting. 4 credits.

BUSINESS EDUCATION AND OFFICE ADMINISTRATION

Chairman, Harry Olson

Graduate Faculty: Olson, Little, Madsen, Reha, Whitford

MASTER OF SCIENCE

An applicant for admission to the Master of Science in Business Education must meet the following requirements:

1. A baccalaureate degree from an accredited college or university.
2. Hold a Minnesota Vocational Teacher Certificate in Business Education or have completed an undergraduate teacher education program from an accredited teacher preparation institution.
3. An acceptable score on the Graduate Record Examination and/or acceptable undergraduate scholarship.

In some cases the applicant may be required to complete additional undergraduate work even though he may have completed a major or minor.

Students pursuing a Master's degree must earn a minimum of 15 graduate only credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research
Ed. 615 Introduction to Research, 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only). 3–9 credits.
B. Elective: Selected course work in business education to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of secondary education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

505. Vocational Education. History, purpose, organization, philosophy of vocational education. 3 credits.

506. Methods for Cooperative Programs. Instructional methods, materials. 3 credits.

507. Adult Education Programs. Planning, administering, supervising, evaluating adult programs. Selecting, training adult education instructors. 3 credits.

508. Coordination Techniques. Guidance, selection, placing students in training stations; job adjustments; developing training programs. 3 credits.

509. Organization and Administration of Cooperative Programs. Principles, practices; local, state, federal regulations; reporting and evaluation; club programs; curriculum; affiliations. 3 credits.

513. Office Management. Problems in planning and directing functions of business or professional offices, executive duties and responsibilities of office manager and private secretary, supervision of employees. 4 credits.

514. Office Automation. Selection, acquisition, application, operation of electronic data processing systems, 4 credits.

516. Consumer Education. General education course open to all students; problems of personal buying, consumption, credit, financing, investing, insuring, homeownership, household records. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Foundations in Business Education. Principles, philosophy, and curriculum development in business education. 3 credits.

602. Improvement of Instruction in Secretarial Subjects. Instructional materials, methods and procedures, standards of achievement, and other classroom problems. 3 credits.

603. Improvement of Instruction in Accounting. Objectives, courses of study, materials, teaching techniques and innovations for teaching bookkeeping and accounting. 3 credits.

604. Improvement of Instruction in The Basic Business Subjects. Objectives, courses of study, materials, teaching techniques, evaluation, curriculum, related classroom problems. 3 credits.

605. Seminar: _____. Discussion and evaluation of readings, current research, and teaching problems in business education. 1–3 credits.

606. Analysis of Research in Business Education. Analysis and application of formal and informal research affecting business teachers. Prerequisite: Education 615. 3 credits.

607. Business for General Education. An introduction to consumer law, casualty and life insurance, investments and annuities. Federal income tax, estate planning and wills. Not open to business majors or minors. 3 credits.

608. Administration and Supervision of Business Education. Problems of teacher, department head, or supervisor beyond those involved in classroom teaching. Equipment

and layout, budget making, publicity, curriculums, selection of textbooks, employment, rating, and related problems. 3 credits.

699. Master's Thesis. 3-9 credits.

MANAGEMENT AND FINANCE

Chairman, LaVerne Cox

Graduate Faculty: Cox, Burnes, Pabst, Rajender, Wentworth, Williams

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

560. Problems in Personnel Administration. Analysis of selected personnel problems. Emphasis is on wage and salary administration, job evaluation, wage and salary surveys, merit rating, profit sharing, and incentives. Intensive study of selected issues and problems of manpower utilization. 4 credits.

561. Collective Bargaining. An analysis of the bargaining process with particular emphasis on the legislative and administrative requirements applicable to unions, managements, and employees. Development and evaluation of the collective bargaining agreement. 4 credits.

564. Purchasing and Materials Management. Fundamental information regarding principles, procedures, and methods for providing materials and services, not only within the narrow concept of purchasing, but also within the broad concept of complete management of the flow of materials from the time a need is determined until it enters the production process. (Seniors and graduate students only). 4 credits.

565. Motion and Time Study. Systematic study of work systems through the techniques of methods design and analysis (process charts, operations analysis, and micromotion and memomotion studies), and work measurement (stop watch time study, predetermined time study methods, and work sampling). Prerequisite: MF 363 recommended. 4 credits.

567. Organization Theory. Analysis of relationships fostered by the industrialized productive setting leading to an integration of individual, group, and organization conclusions and data. 4 credits.

572. Financial Institutions. A study of the major financial institutions and their role in the field of finance including principal financial management problems related to these financial institutions. Management of commercial banks, savings and investment institutions, leading institutions, and investment intermediaries will be examined in depth. 4 credits.

573. Investment Principles. Types of investment securities, security market operation, investment policies; principles of analyzing securities. The investment area, media, institutional aids; formulation of broad personal investment programs. 4 credits.

574. Security Analysis. Classification, analysis of securities, markets, industries. Formulation of investment policy for institutions, aggressive personal investor with emphasis on the construction and management of portfolios of institutional investors. 4 credits.

575. Life and Health Insurance. Risk management principles are applied to personal and personnel risks. Included in the course is an examination of individual life and health contracts, group life insurance, pension plans, programming, estate planning, variable annuities and equity funding, business insurance, social insurance, premium reserves and cash value computations. 4 credits.

576. Property and Liability Insurance. Risk management principles are applied to insurable property and liability risk. Study includes contract analysis, essentials of insurance law, rates and reserves, surveys, types of property and liability insurees, and optimum insurance programs. 4 credits.

578. Advanced Real Estate. Financial and legal aspects of real estate ownership and occupancy with emphasis on deeds, contract for deed, estate mortgages, contract for

purchase and trust as well as intestate and testate succession laws, taxation, homestead and special problems related to these areas. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar - (1) Management; (2) Finance; (3) Insurance & Real Estate. An examination of recent developments in business concepts and analyses of specific business problems, with emphasis on their relationships to the specific functional areas of business. 4 credits.

663. Production and Operations Management. Production system as an integral part of the total management information system of any organization must constantly be evaluated, redesigned (when necessary), and synthesized to meet the demands of the changing environment. Focus is placed on the effective integration of the varied resources in the pursuit of organizational goals as related to production. 4 credits.

664. Public Policy Seminar. Readings and problem analysis; business decisions in economic, legal, political, and social interest. 4 credits.

665. Readings in Management. Special readings to provide depth and breadth in the subject area. 4 credits.

684. Corporate Financial Reporting. Accounting systems and their role in the valuation of assets, the determination of income, and the measurement of equities. Concentration is on the interpretation of published accounting statements. 4 credits.

671. Financial Management Policy. An analysis of the problems confronting corporate financial management in forecasting financial requirements under uncertainty; the relation of short- and long-term capital commitments to internal and external capital rationing; appropriate methods of financing capital expenditure commitments.

672. Readings in Finance. Special readings to provide depth and breadth in the subject area. 4 credits.

673. Management of Human Resources. An analysis of principles applicable to problems arising out of individual and group employment relationships. Theories of selecting, developing, motivating and accounting for human resources will be discussed and illustrated with cases.

675. Readings in Insurance and Real Estate. Special readings to provide depth and breadth in the subject area. 4 credits.

MARKETING AND GENERAL BUSINESS

Chairman, Robin Peterson

Graduate Faculty: Peterson, Benson, Calhoun, Daggett, Hanafy, Heath, D. Krueger, M. Lu, Reitzel, Stahlecker

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

520. Retailing Management. Organization for retailing and functional activities involved. Includes problems of inventory methods, credit and collections, personnel, location, layout, receiving, and delivery. 4 credits.

521. Advanced Retailing Management. Study of markup, computation of profit, inventory valuation, stock control, merchandise planning, expense control, and merchandising policies. 4 credits.

522. Price Policy. Examines price theory, objectives, and practice. Role of judgment in prices, non-price competition, administered pricing, judicial and legislative information. 4 credits.

523. Advertising Management. Analysis of advertising policies and practices in campaign planning, media selection, client-agency, relationships, research and testing. Prerequisite: Mktg. 322, or consent of instructor. 4 credits.

524. Sales Management. Managerial aspects of sales promotion, problems involved in investigations of markets, planning sales effort, management of sales personnel, and control of sales operations. Prerequisite: Mktg. 323, or consent of instructor. 4 credits.

525. Marketing Research. Research process as an aid to decision making in marketing management. Research methodology, presentation of marketing research results, evaluation of the effectiveness of marketing research. 4 credits.

526 Marketing Systems. An introduction to the system concept in the analysis of marketing activities. The study of system theory, and its application to marketing. Emphasis is on the explanation of varying approaches to marketing systems, such as ecological, institutional, and social physics. The development of marketing systems. 4 credits.

527. International Marketing. Stresses the importance of international marketing to the American economy and analyzes United States international marketing with emphasis on the problems and practices of managing international marketing activities. Characteristics, structure, and competitive factors of international markets are analyzed. 4 credits.

531. Problems in Retailing. Case studies in retail profit, merchandising policies, buying, pricing, merchandise control, sales promotion, personnel, store system and operation, and finance. 4 credits.

537. Business Law. Real and personal property, trusts, mortgages, bankruptcy, wills and estates, and secured transactions. 4 credits.

540. Business Statistics III. Review of statistical inference, analysis of variance with two or more variables of classification, multiple regression or correlation, analysis of covariance and non-parametric methods. Prerequisite: MKGB 240. 4 credits.

545. Advanced Programming Projects I. Planning, coding, testing and documenting computer programs for selected business applications using a scientific oriented programming language. Prerequisite: MKGB 250 and Math 271. 2 credits.

546. Advanced Programming Projects II. Planning, coding, testing and documenting computer programs for selected business applications using a business oriented programming language. Prerequisite: MKGB 250. 2 credits.

550. Administration and Control of Management Information Systems. Organizational structure of a management information system; information systems management; personnel selection, training, motivation and evaluation; acquisition, analysis administration and control of hardware and software; managerial control of MIS; computer's impact on administration and control of MIS. Prereq: MKGB 351. 4 credits.

551. Computer Simulation for Business. The course includes rationale for computer simulation, techniques for random number generation, generation of stochastic variates for simulation, simulation of inventory systems, simulation of queuing systems, simulation of large-scale systems, simulation languages and the verification of simulation results. Prerequisite: MKGB 240, 350 or consent of instructor. 4 credits.

552. Advanced Topics in Management Information Systems. Recent developments in concepts, theory, practices in the analysis and design of management information systems. Prereq: MKGB 351. 4 credits.

554. Business Decision Theory. Principles used in decision making, the assumptions behind utility and application of utility, decision making under uncertainty, Bayes strategies and their applications in business. Prereq: MKGB 240. 4 credits.

555. Business Research. Fundamentals of research methodology, including planning, organizing, and executing a research project; sampling techniques; basic concepts and techniques in the design of experiments; interpretation of data; art and strategy of presenting findings. Prereq: MKGB 440 and 540. 4 credits.

556. Linear Programming. Formulation of linear programming problems, simplex methods, dual simplex, post-optimality analysis and parametric linear programming. Introduction to integer linear programming, cutting plane algorithm, branch and bound algorithms and their applications. Prereq: MKGB 441 or consent of instructor. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar — Marketing. Selected topics related to marketing theory practice. Consent of instructor required. 4 credits.

626. Readings in Marketing. Augments coursework in marketing to meet individual student needs. Consent of instructor required. 1-3 credits.

629. Marketing Plans and Decision Making. Analysis and planning for decision making in marketing. Stresses the development of consumer oriented policy in the areas of product, price, logistics, and promotion. These marketing problems are considered in the context of environmental concern and social awareness as well as the economy. 4 credits.

632. Decision Making Techniques. The theory of business decision making and application of analytical concepts and tools to business problems. Prerequisite: Mathematics 231, Management & Business 240. 4 credits.

633. Business Case Analysis. Independent research culminating in written and/or oral presentation. 1-3 credits.

634. Legal and Social Foundations of Business. Case study of business as it is affected by law and social pressures and needs. Detection of issues, leading to detect and formulate policy as a guide to resolution of issues, and development of research capabilities are major emphasis. No prerequisite. 4 credits.

SCHOOL OF EDUCATION

Kenneth A. Ames, Dean

EDUCATIONAL ADMINISTRATION

Chairman, James W. Anderson

Graduate Faculty: J. Anderson, Farrah, Holmgren

All Master's degree and certification programs in Educational Administration that are completed by August 31, 1974 will meet the State of Minnesota certification requirements for school administrators. However, all students not completing their educational administration programs by August 31, 1974 will be subject to the revised State of Minnesota certification requirements for school administrators.

MASTER OF SCIENCE — EDUCATIONAL ADMINISTRATION

Elementary School Administration

A student who wishes to enroll in the program for Elementary School Principals must have completed an undergraduate teacher education program from an accredited teacher preparation institution. To be eligible for the Standard Administrator's Certificate, the student must complete the program requirements for the Master's degree and have successfully completed three years teaching or supervisory experience on a certificate valid for the position in which the experience was obtained.

The following program has been approved by the Minnesota State Department of Education for meeting the professional preparation requirements of the Standard Elementary School Principal's Certificate.

Plan A, 45 credits; Plan B, 48 credits.

- I. Ed. 615 Introduction to Research, 3 cr.
- II. Major in Elementary School Administration: Minimum, 24 credits.
 - A. Prescribed:
 - El. Ed. 660, 3 cr.
 - Ed. Adm. 649, 3 cr.
 - Ed. Adm. 696, 3 cr.
 - Ed. Adm. 699, 3-6 cr. (Plan A only).
 - B. Electives: A minimum of three additional credit hours is required in each of the following areas: Administration, Supervision and Curriculum. Any of the courses listed in the following three sections will meet these elective requirements:
 1. Elementary School Administration
 - Ed. 619, 3 cr.
 - Ed. Adm. 650, 3 cr.
 - Ed. Adm. 698, 3 cr.
 - Ed. Adm. 674, 3 cr.
 2. Elementary School Supervision
 - Ed. 619, 3 cr.
 - El. Ed. 651, 3 cr.
 - El. Ed. 652, 3 cr.
 - El. Ed. 653, 3 cr.
 - El. Ed. 654, 3 cr.
 - El. Ed. 655, 3 cr.
 - El. Ed. 658, 3 cr.
 - El. Ed. 662, 3 cr.
 - Ed. 667, 3 cr.
 - Ed. 678, 3 cr.
 - El. Ed. 679, 3 cr.
 3. Elementary School Curriculum
 - El. Ed. 521, 3 cr.
 - El. Ed. 651, 3 cr.
 - El. Ed. 652, 3 cr.
 - El. Ed. 653, 3 cr.
 - El. Ed. 654, 3 cr.
 - El. Ed. 655, 3 cr.
 - El. Ed. 656, 3 cr.
 - El. Ed. 658, 3 cr.
 - El. Ed. 662, 3 cr.
 - Ed. 679, 3 cr.
 - H. Ed. 630, 3 cr.
 - Music 650, 4 cr.

4. Additional elective credits must be chosen from the three foregoing sections to make a total of 24 credits in the major.

III. Other Professional Education: Minimum, 9 credits.

- A. Prescribed: Ed. 616, 3 cr. Psy. 678, 3 cr.

- B. Elective: Elect one of the following courses:

Sec. Ed. 661, 3 cr. Psy. 663, 3 cr.

Spec. Ed. 680, 3 cr. Psy. 564, 3 cr.

Spec. Ed. 581, 3 cr. Psy. 572, 3 cr.

IV. General Studies: Minimum, 9 credits, see General Studies Core, page 23.

- V. Electives: Minimum, 3 credits, Plan B only.

Regulations For Students Who Seek Certification as an Elementary School Principal and Who Hold a Master's Degree

- a. People who have completed a Master's degree at an accredited institution may be granted endorsement for elementary school principal certification upon completion of course work and other requirements. These students must declare their intention to work toward certification by filing a graduate application blank with the Graduate Studies Office.
- b. These students will be subject to the same selection and review procedures as are all others in the program.
- c. Since students in this category are not degree candidates, they will not be subject to the nine-credit transfer regulation. However, a minimum of 15 credits in course work required for certification must be earned at St. Cloud State College.
- d. All students seeking endorsement for certification as an elementary school principal must pass a final written comprehensive examination.

Secondary School Administration

A student who wishes to enroll in the program for Secondary School Administration must have completed an undergraduate teacher education program from an accredited teacher preparation institution. To be eligible for the Standard Administrator's Certificate, the student must complete the program requirements for the Master's degree and have successfully completed three years teaching or supervisory experience on a certificate valid for the position in which the experience was obtained. In addition, he needs the recommendation of the chairman and one other member of the Department of Educational Administration before he meets the requirements established for the Master's degree program in Secondary School Administration. Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

The following program has been approved by the Minnesota State Department of Education.

Plan A, 48 credits; Plan B, 51 credits.

- I. Research: 3-6 credits.

Prescribed:

- A. Ed. 615 Introduction to Research, 3 credits.

- B. Psy. 678 Introduction to Graduate Statistics
(Plan B only), 3 credits.

- II. Major: Minimum, 21 credits.

Prescribed:

- A. Administration: Minimum, 12 credits.

1. Ed. Adm. 674 Educational Administration, 3 credits.

2. Ed. Adm. 676 Secondary Schools Principalship, 3 credits.

3. Ed. Adm. 650 School Law, 3 credits.

4. Ed. Adm. 677 Personnel Administration in Education, 3 credits.

- B. Curriculum and Instruction: Minimum, 6 credits.

1. Sec. Ed. 661 Secondary School Curriculum, 3 credits.

2. Sec. Ed. 675 Improvement of Secondary School Instruction, 3 credits.

- C. Master's Plan: Minimum, 3 credits.
 - 1. Ed. Adm. 699 Master's Thesis (Plan A only), 3-9 credits.
 - 2. Ed. Adm. 606 Internship (Plan B only), 3 credits.
- III. Related Fields: Minimum, 15 credits (consent of adviser).
 - A. Professional Education: Minimum, 6 credits.
 - B. Psychology: Minimum, 9 credits.
- IV. General Electives: Minimum, 9 credits (consent of adviser).

Regulations for Students Who Seek Certification as Secondary School Principal and Who Hold a Master's Degree

- a. People who have completed a Master's degree at an accredited institution may be granted endorsement for secondary school principal certification upon completion of course work and other requirements. These students must declare their intention to work toward certification by filing a graduate application blank with the Graduate Studies Office.
- b. These students will be subject to the same selection and review procedures as are all others in the program.
- c. Since students in this category are not degree candidates, they will not be subject to the fifteen credit transfer regulation. However, a minimum of 15 credits in course work required for certification must be earned at St. Cloud State College.
- d. All students seeking endorsement for certification as a secondary school principal must pass a final written comprehensive examination.

Regulations for Students Who Seek Certification as a Superintendent of Schools and Who Hold a Master's Degree

- a. People who have completed a Master's degree at an accredited institution may be granted endorsement for superintendents of schools certification upon completion of course work and other requirements. These students must declare their intention to work toward certification by filing a graduate application blank with the Graduate Studies Office.
- b. These students will be subject to the same selection and review procedures as are all others in the program.
- c. Since students in this category are not degree candidates, they will not be subject to the fifteen credit transfer regulation. However, a minimum of 15 credits required for certification must be earned at St. Cloud State College.
- d. All students seeking endorsement as a superintendent of schools must pass a final written comprehensive examination.

The applicant must hold a Master's Degree in elementary or secondary school administration. In addition the applicant must complete the following required course work before he would be recommended for certification:

Required:

- Ed. Ad. 604 School Finance (3)
- Ed. Ad. 608 Public Relations for School Administrators (3)
- Ed. Ad. 640 School Plant Planning and Management (3)
- Ed. Ad. 650 School Law (3)
- Ed. Ad. 677 Personnel Administration in Education (3)

Required: 9 credits from the following courses:

- 1. El. Ed. 660 Elementary School Curriculum (3)
- or
- Sec. Ed. 661 High School Curriculum
- 2. Sec. Ed. 675 Improvement of Secondary School Instruction (3)
- or
- Ed. 696 Supervision of Elementary School Instruction (3)
- 3. Ed. 600 Special Problems (3)
- 4. Ed. Adm. 601 Research and Theory in Educational Administration (3)

- 5. Ed. 616 Philosophy of Education (3)
- 6. Ed. 628 The School and the Social Order (3)
- 7. Ed. 659 Problems in American Education (3)
- 8. Ed. 667 Human Relations. (3)

SPECIALIST DEGREE — EDUCATIONAL ADMINISTRATION

Before a student will be permitted to enroll in this program he must hold a valid Minnesota Standard Administrator's Certificate.

I. Admission Requirements:

- a. An applicant must complete all graduate entrance examinations and other procedures required for advanced degrees at St. Cloud State College. The student's performance on these examinations will be considered as a part of the evidence used in determining his eligibility for admission.
- b. Evidence of writing ability (i.e., pertaining to any phase of Educational Administration).
- c. Grade point average for admission is a 3.2 grade point average in the Master's degree program.
- d. In the case where the applicant is not interested in pursuing the Specialist Degree or cannot qualify for the Specialist Degree program but must meet certification requirements of the State Department of Education, he will pursue the Sixth Year Program in Educational Administration.

II. Program Requirements:

- a. A grade point average of 3.25 is required for graduation. This average is calculated on course work taken in the Specialist Degree program.
- b. The student must fulfill all course requirements for the Specialist Degree in School Administration.
- c. Program Planning Process:
 - 1. Program planning will be a joint process involving the student, adviser, an administrative evaluation from the school district in which the student is employed, and the Professional Review Committee.
 - 2. A final program must be submitted for approval upon completion of 15 and not more than 21 hours of work completed towards the Specialist Degree.
- d. Examinations:

A final written and/or oral comprehensive examination related to the objectives of the Educational Administration Program is required.
- e. The program completion shall extend a maximum of six years from the date of admission to the Specialist Degree Program.
- f. Residency of at least one quarter as a full-time student is required. A full-time quarter is defined as from 12 to 16 quarter hours. Two summer sessions with a minimum of 6 credits per session is considered as one quarter.
- g. Transcripts showing credit earned from other institutions approved to grant advanced degrees in Educational Administration will be received at the time of admission to the Specialist Degree Program. All transfer credits must be accepted at the time that the student submits a program for approval. The student must complete a minimum of 30 quarter hour credits on the Specialist Degree Program at St. Cloud State College.
- h. The Specialist Degree Candidate will be expected to complete a Field Study in Educational Administration which will: (1) define his problem area; (2) locate and identify material relevant to the problem; (3) interpret and evaluate the material; and (4) report the findings in a logical and intelligible form. The following guidelines will assist the candidate in preparation of a field study:
 - 1. The candidate shall submit the plans for the Field Study for action by a committee appointed by the Graduate School composed of the adviser, one additional member from the major department, and a third representative from a related department.
 - 2. Standards for the preparation of the Field Study shall be in accordance with

the publication of the Graduate Studies Office entitled, "A Manual for the Preparation of Theses, Field Studies, Starred Papers, or Creative Works."

3. There is no foreign language requirement.

III. Elementary School Administration

The applicant for the Specialist degree must complete a minimum of forty-five quarter credits beyond a Master's degree in School Administration.

The following program is required:

1. Sufficient experience, either as a practicing principal or in a supervised internship, to indicate probable success as an elementary school principal.
2. Completion of all major courses required in the Master of Science program, Ed. Ed. 660, Ed. Adm. 649 and Ed. Adm. 696.
3. Completion of an acceptable field study.
4. An approved program of course work as follows:

Minimum, 45 credits

- i. Research: 3-9 credits.
 - A. Prescribed: 3-9 credits

Ed. Adm. 641 Surveys and Field Studies 3-9 credits
 - B. Electives: 0-6 credits, selected from the following: To be completed if not included on the M.S. program.

Ed. 614 Interpretation of Research (3)

or

Ed. 615 Introduction to Research (3)

and

Psy. 678 Introduction to Graduate Statistics (3)
- ii. Administration, Curriculum, and Instruction: 18 credits.

With the approval of the adviser, the student will select a minimum of 18 credits from the areas of administration, supervision, curriculum and instruction, and individualized study.
- iii. Foundations, Psychology, and Special Education: 9-15 credits, selected from the areas of educational foundations, psychology, and special education (consent of adviser).
- iv. Related Fields: Minimum, 9 credits, selected from areas outside the field of professional education (consent of adviser).

IV. Secondary School Administration

The applicant for the Specialist degree must complete a minimum of forty-five quarter credits beyond a Master's degree in School Administration.

The following program is required:

1. Sufficient experience, either as a practicing principal or in a supervised internship, to indicate probable success as a secondary school principle.
2. Completion of all major courses required in the Master of Science program. Ed. Adm. 650, Sec. Ed. 661, Ed. Adm. 674, Sec. Ed. 675, Ed. Adm. 676, Ed. Adm. 677, and Ed. Adm. 606.
3. Completion of an acceptable field study.
4. An approved program of course work as follows:
 - i. Research: 3-9 credits.
 - A. Prescribed: 3-9 credits.

Ed. 641 Surveys and Field Studies 3-9 credits.
 - B. Electives: 0-6 credits, selected from the following: To be completed if not included on the M.S. program.

Ed. 614 Interpretation of Research (3)

or

Ed. 615 Introduction to Research (3)

and

Psy. 678 Introduction to Graduate Statistics (3)
 - ii. Administration, Curriculum and Instruction: Minimum, 18 credits.

Selected from the areas of administration, supervision, curriculum and instruction, and individualized study (consent of adviser).

iii. Foundations, Psychology, and Special Education: 9-15 credits.

Selected from the area of educational foundations, psychology, and special education (consent of adviser).

iv. Related Fields: Minimum, 9 credits, selected from areas outside the field of professional education (consent of adviser).

V. General School Administration

The applicant for the Specialist degree must complete a minimum of forty-five quarter credits beyond a Master's degree in School Administration.

The following program is required:

1. Sufficient experience, either as a practicing principal or in a supervised internship, to indicate probable success as a school superintendent.
2. Completion of all major courses in the required Master of Science program in Elementary School Administration or Secondary School Administration.
3. Completion of an acceptable field study.

4. An approved program of course work as follows:

i. Research: 3-9 credits.

A. Prescribed: 3-9 credits.

Ed. Adm. 641 Survey and Field Studies 3-9 credits.

B. Electives: 0-6 credits, selected from the following: (To be completed if not included on the M.S. program.)

Ed. 614 Interpretation of Research (3)

or

Ed. 615 Introduction to Research (3)

and

Psy. 678 Introduction to Graduate Statistics(3)

ii. Administration, Curriculum, and Instruction: Minimum, 18 credits.

A. Prescribed: Minimum, 6 credits.

Ed. Adm. 604 School Finance, 3 cr.

Ed. Adm. 640 School Planning and Management, 3 cr.

B. Electives: Minimum, 12 credits.

Selected from the areas of administration, supervision, curriculum and instruction, and individualized study (consent of adviser).

iii. Foundations, Psychology, and Special Education: 9-15 credits. Selected from the area of educational foundations, psychology, and special education (consent of adviser).

iv. Related Fields: Minimum, 9 credits, selected from areas outside the field of professional education (consent of adviser).

ELEMENTARY EDUCATION

Chairman, Gordon Mortrude

Graduate Faculty: G. Mortrude, E. Anderson, Bavery, Chang, Hagen, Karakas, Nappi, Park, Purdom, Rouch, R. Schmidt.

MASTER OF SCIENCE - Elementary Education

In order to gain admittance to the graduate program with Elementary Education as his major, a student must have completed an undergraduate teacher education program from an accredited teacher preparation institution. Two years teaching experience at the elementary school level is regarded as desirable background for admission to this program.

Students pursuing a Master's degree must earn a minimum of 15 graduate only credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Major in Elementary Education (minimum 24 credits).

- A. Prescribed:
 - 1. El. Ed. 699, 3 to 6 cr. (Plan A).
 - 2. El. Ed. 660, Elementary School Curriculum, 3 credits.
- B. Electives: A minimum of 9 to 15 credits must be earned in courses related to teaching in the elementary school.
- C. Other Professional Education: A minimum of 3 credits each must be earned in two of the following four areas:

Ed. 616, 3 cr., or	Spec. Ed. 680, 3 cr.
Ed. 659, 3 cr.	Psy. 663, 3 cr. or
Ed. Adm. 650, 3 cr.	Psy. 571, 3 cr.
- II. Psy. 678 Introduction to Graduate Statistics, 3 credits.
- III. Ed. 615 Introduction to Research, 3 credits.
- IV. General Studies: A minimum of 15 credits must be earned in fields other than Professional Education; 6 of these 15 credits must be taken in the General Studies Core, see page 23.
- V. Electives: Minimum, 3 credits, Plan B only.

MASTER OF SCIENCE - Reading Specialist

A graduate student who wishes to become certified as a reading coordinator, consultant, or supervisor must have completed a Master's degree. Two years of teaching experience are regarded as desirable background for admission to the program.

Two options are provided in the Master of Science-Reading Specialist Degree Program. By following Track I the graduate student will be eligible for SLBP certification. Track II provides for more flexibility in the student's program.

Three Starred Papers or a thesis will be written during the Master's degree program. Courses in which Starred Papers will be written must be determined and marked with an asterisk when the graduate student's program is approved. An oral comprehensive examination will be given during the last quarter of the student's work.

Both Plan A (thesis) and Plan B (Three Starred Papers) are available to students who enroll in this program. A total of 48 credits is required on both Plan A and Plan B.

Students pursuing a master's degree must earn a minimum of 15 Graduate only credits in their major field of concentration.

An applicant for admission to this program must have met the following requirements:

1. He must hold or be eligible for a Minnesota Elementary or Secondary School Teacher's Certificate.
2. He must have taken a course in developmental reading at the elementary school level (Education 312, 412, or equivalent).
3. He must have taken a course in children's or adolescent literature (English 353, Education 290, or equivalent).
4. In following Track 1, he must have training in the teaching of mathematics (Education 458 or equivalent), and Special Education.

Plan A or B; Minimum, 48 credits.

- I. **Research:** Minimum, Plan A, 3 credits; Plan B, 6 credits.

Prescribed:

- Education 615 (Plan B only).
- Psychology 678 (Plan A and B).

- II **Major:** Minimum, Plan A, 27 credits; Plan B, 24 credits.

Prescribed:

- Education 517
- El. Ed. 521
- Spec. Ed. 591 (Track I only)
- El. Ed. 623
- El. Ed. 625
- Ed. 619
- Spec. Ed. 680
- Spec. Ed. 680 (Track II only)

Psychology 686 or 687
 El. Ed. 699 (Plan A, 6 credits)
 El. Ed. 658 (Plan B only)

III. Professional Area: Minimum, 18 credits. A student must choose either Track I or Track II.

Track I	Track II
Spec. Ed. 572	Psychology 663
Spec. Ed. 573	Electives (15 credits, consent of adviser)
Spec. Ed. 592	(a) Maximum of four credits independent study.
(Prereq. Ed. 591 or 623)	(b) Minimum of eleven credits in 600 level courses.
Teaching 622 (3 credits)	
* Spec. Ed. 689	
* Psychology 670 or 572	

* These courses should be taken prior to registration for El. Ed. 623 or any of the practicums.

Regulations for Students Who Seek Certification as an Elementary or Secondary Reading Teacher

To be recommended for an Elementary or Secondary Reading Certificate the student must: (a) Hold or be eligible for a Minnesota State Teaching Certificate; (b) Have completed successfully two years of teaching experience; (c) Complete one course in each of the following areas which may be a part of or beyond the Bachelor's degree requirements (teachers holding secondary school certification only are not eligible to pursue certification as an elementary reading teacher):

Remedial Reading Certification

El. Ed. 312 or 412	- Developmental Reading I or II
Ed. 417-517	- Developmental Reading in the Junior and Senior High School (Secondary only)
El. Ed. 421-521	- Diagnosis and Correction of Reading Difficulties
El. Ed. 623	- Practice in Analysis of Reading Disabilities
El. Ed. 625	- Practice in Correction of Reading Disabilities
Psychology 469-569	- Individual Appraisal
OR	
Psychology 686, 687	- Binet; Wechsler

Developmental Reading Certification (Secondary only)

El. Ed. 312 or 412	- Developmental Reading I or II
Ed. 417-517	- Developmental Reading in Junior or Senior High School
El. Ed. 421-521	- Analysis and Corrections of Reading Difficulties
Eng. 353	- Literature of Adolescents

SECONDARY EDUCATION

Chairman, James Liesch

Graduate Faculty: Liesch, Bjorklun, Brewer, Grunerud, P. Johnson, Jones, V. Mork, L. Mortrude

MASTER OF SCIENCE - Junior High School Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution. The graduate program is designed for teachers who are or plan to be career junior high school teachers. Prospective candidates must meet all the standard entrance requirements for graduate studies at

this college, have an entrance conference with a junior high graduate adviser; the adviser may recommend a qualifying examination or prerequisite course work depending on the background of the applicant.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 48 credits; Plan B, 51 credits.

- I. Research
Prescribed:
Ed. 615 Introduction to Research, 3 credits.
or
Ed. 614 Interpretation of Research, 3 credits.
- II. Major: Minimum, 36 credits.
Prescribed:
A. Sec. Ed. 699, Thesis, 3-6 credits (Plan A only). Problem may be selected in subject matter area or junior high school education.
B. Sec. Ed. 635 Junior High School Theories and Practices, 3 credits.
Sec. Ed. 665 Junior High School Seminar, 3 credits.
C. Junior High School teaching and learning area. 9 credits.
D. Subject matter concentration in junior high school teaching fields: Plan A, 15-18 credits; Plan B, 21 credits. Two academic fields are recommended.
- III. Related Fields: 3-6 credits.
Prescribed:
A. Psy. 678 Introduction to Graduate Statistics, 3 credits. (Plan B only).
B. Psychology 670 Developmental Psychology, or equivalent course in early adolescent psychology, 3 credits.
- IV. General Studies: Minimum, 6 credits. See General Studies Core, page 23.

MASTER OF SCIENCE — Secondary School Teaching Fields

In all secondary school majors except those where a different amount of undergraduate preparation is prescribed in the departmental description, a graduate student must have completed at least an undergraduate minor in a subject area in order to be eligible to choose it as his major at the graduate level. In some cases, it will be necessary for the applicant to complete some prerequisite undergraduate work even though he may have an undergraduate major or minor in his proposed graduate major.

The Professional Education component requires students to select at least one course in the theoretical areas of foundations, curriculum, and instruction. Ordinarily the courses recommended in Foundations are: ED. 609, ED. 616, ED. 628, ED. 659, SEED 549; in Curriculum, ED. 603, ED. 613, and SEED 661; in Instruction, SEED 607, SEED 635 and SEED 675. Consult with the Chairperson of Secondary Education for advisement and approval.

Programs in secondary school teaching fields are listed under the departmental majors. For details of program requirements, refer to department course listings. Programs are available in art, biology, business education, English, geography, health and physical education, history, industrial education, mathematics, music, physical science (listed under chemistry or physics), social science (listed under interdisciplinary studies).

SPECIAL EDUCATION

Chairman: Stanley Knox

Graduate Faculty: Knox, Ayers, J. Lewis, Lovelace

MASTER OF SCIENCE — Special Education

The Department of Special Education offers two separate programs which lead to a Master of Science degree.

Program I is designed for students who have completed an undergraduate teacher education program from an accredited teacher preparation institution. One year of teaching

experience is considered desirable for admission to this program. Both Plan A and Plan B are available to students who enroll in this program.

Plan A is designed primarily for those students who have had undergraduate preparation in special education. Plan B is designed primarily for individuals who are entering the field of special education initially and are seeking certification. Those who select Plan B must have had SPED 471 or its equivalent or obtain the approval of the Department. Students may obtain an emphasis in mental retardation, special learning and behavior problems (learning disabilities), or administration.

Program II is available for students who are not eligible for a teaching certificate but who wish to pursue a program to prepare them to teach trainable mentally retarded children. This program leads to certification to teach trainable mentally retarded children only. Students desiring other certification should check with an adviser. Students must have SPED 471 or its equivalent prior to admission to the program. Only Plan B is available under this program.

Students completing the Plan B program (either Program One or Two) will be required to pass a final oral examination based on the starred papers submitted to the final evaluation committee and the results of the comprehensive examination (see page 18 of this bulletin for details on starred papers and comprehensive examinations). Students should check with their adviser during the first quarter of enrollment to obtain information on the procedure and the requirements of each. Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B (Starred Papers), 48 credits.

Program I

I. Research: Minimum, 3 credits.

Prescribed:

Ed. 682 Research in Special Education, 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed:

1. Spec. Ed. 684 Problems in Special Education, 3 credits.

2. Spec. Ed. 685 Recent Research in Mental Retardation, 3 credits.

or

Spec. Ed. 687 Curriculum for Special Education, 3 credits.

3. Spec. Ed. 699 Master's thesis (Plan A only), 3-9 credits.

Additional prescribed courses for Plan B

4. Spec. Ed. 680 Current Trends in Education, 3 credits.

5. Tchg. 621 Practicum in Special Education, 3 credits.

or

Tchg. 622 Practicum in Special Learning Disabilities, 3 credits.

or

Tchg. 623 Practicum in Special Education Administration, 3 credits.

B. Electives: To total a minimum of 24 credits in the major; a minimum of 6 credits must be earned in 600 level courses (consent of adviser).

III. Professional Education: A minimum of 6 credits must be earned in 600 level courses (consent of adviser).

IV. Related Fields: Minimum, 9 credits.

A. Prescribed:

Psych. 678 Introduction to Graduate Statistics, 3 credits.

B. Electives: Minimum, 6 credits from Related Fields, General Studies Core or courses in the Major (consent of adviser).

V. General Electives: Minimum; Plan A, 3 credits; Plan B, 6 credits (consent of adviser).

Program II (Plan B only)

I. Research: Minimum, 3 credits.

Prescribed:

Ed. 682 Research in Special Education, 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed:

1. Spec. Ed. 684 Problems in Special Education
2. Spec. Ed. 685 Recent Research in Mental Retardation
3. Spec. Ed. 687 Curriculum Development in Special Education
4. Spec. Ed. 573 Behavior Problems in the School
or
Spec. Ed. 681 Behavioral Analysis of Handicapped Children
5. Spec. Ed. 689 Psycholinguistics
or
SSPA 560 Language Development
6. Spec. Ed. 574 Education of the Trainable Mentally Retarded
7. Tchg. 621 Practicum in Special Education
8. Psy. 573 Psychology of Mental Retardation

III. Professional Education: Minimum; 6 credits (including IM 603).

IV. Related Fields: Minimum; 9 credits.

A. Prescribed:

Psy. 678 Introduction to Graduate Statistics

B. Electives: Minimum; 6 credits

To be selected from Related Fields, General Studies, or courses in the major (consent of adviser).

V. General Electives: Minimum; 6 credits.

(consent of adviser).

GENERAL EDUCATION

COURSE DESCRIPTIONS

Most of the education courses that are listed under departments of the School of Education in this Bulletin are predominantly the responsibility of the department under which they have been listed. A number of courses are appropriate for a variety of programs in the different departments. Dr. Liesch, Chairman of the Secondary Education Department, is responsible for coordinating these course offerings.

ADVANCED UNDERGRADUATE AND GRADUATE

517. Developmental Reading in Junior and Senior High School. Nature of high school reading program, development of reading techniques and skills, development of vocabulary, reading interests and reading ability in content fields, appraisal of reading abilities, diagnosis and remediation. 4 credits undergraduate, 3 credits graduate.

COURSES FOR GRADUATE STUDENTS

602. Evaluation of the School Program. Historical and recent developments in evaluation of the school program: assessment, performance, contracting, accountability, practices, problems, and issues, evaluation research studies of significance evaluative criteria, approaches to school evaluation; published evaluation materials for appraising the school program, and accrediting groups. 3 credits.

603. Curriculum Construction. Curriculum patterns; trends, influences for change; courses of study in the subject areas; the techniques for constructing curriculum; K-12 scope and sequence; the instructional, psychological, medical, and other out-of-school resources available as effective supplements to the instructional program and how to relate them to the group. 3 credits.

605. Current Instructional Research. A review and appraisal of research study findings in all instructional areas. Educational implications of the research. 3 credits.

607. Modern Trends in Secondary Education. Various kinds of new educational materials, programs and equipment; speakers, visitations, and observation. 3 credits.

609. Comparative Education. Foundations, practices, and problems of European, Asiatic, and American school systems. 3 credits.

613. Practicum in Curriculum Construction and Development. Actual work with a school

system to (1) survey the needs of the community, (2) study the present curriculum in the school, and (3) suggest changes. This may be a survey of the total curriculum as a generalist or a specific subject area as a specialist. Results will be presented in form of a paper to the instructor. 3 credits.

614. Interpretation of Research. Documentation and bibliography; kinds of research and research methods; use and interpretation of basic statistical tools and procedures. 3 credits.

615. Introduction to Research. Evaluating research procedures and interpreting findings. Defining and delimiting a problem, efficient gatherings and proper documentations of data, organization and presentation of findings in acceptable form. 3 credits.

616. Philosophy of Education. Historical aspects of education theory; beliefs, arguments, and assumptions underlying current educational thought and practice. Prerequisite: One year of teaching experience. 3 credits.

619. Administration and Supervision of the Reading Program. Implementation and improvement of reading programs from pre-reading through corrective procedures in high school. 3 credits.

628. The School and the Social Order. Importance of education in the social structure, effects of a culture on education, the interrelationships of education and the economic, social and political systems; comparative education. 3 credits.

659. Problems in American Education. Issues arising in our American educational situation; organizing principle of education in a democracy; the school and the state; education and social reconstruction; public schools and religious education; academic freedom; teaching controversial issues. 3 credits.

667. Human Relations. Techniques and practice of group interaction in problematic relation situations; case analysis; group discussion; socio-drama and role-playing; action research; community and school projects. 3 credits.

678. Supervision of Student Teachers. Student teaching in professional curriculum; procedures for guiding students in planning, teaching, and evaluating learning activities. Prerequisite: Two years successful teaching experience. (Enrollment restricted to present and past co-operating teachers and those in a position to supervise student teachers.) 3 credits.

EDUCATIONAL ADMINISTRATION

COURSES FOR GRADUATE STUDENTS

601. Research and Theory in Educational Administration. Emphasis on human behavior in its relationship to the theory and practice of administrative behavior. Content would be models as drawn from the related fields of business administration, economics, social psychology, sociology, and political science. 3 credits.

604. School Finance. Problems of school finance; business management; local, state and federal sources of school income; budgeting; accounting, construction of the school budget; and the relationship of school finance to the effectiveness of the instructional program. 3 credits.

606. Internship in School Administration. Practical administrative experience in co-operation with selected school administrators. Prerequisite: Two years successful teaching experience. 3-9 credits. (Taken only by special arrangement with the department at least 4 weeks prior to the internship assignment.)

608. Public Relations for School Administrators. Techniques of Public Relations; a study of communication structures in the community; speaking to and working with special interest groups; preparing news releases; working with press, radio, television; school publications. 3 credits.

610. Simulated Experiences in Educational Administration. Actual supervisory and administrative problem situations are dealt with through student participation in representations of the real problems. 3 credits.

640. School Plant Planning and Management. Plant planning and financing, (including community surveys), bond elections, operation and maintenance of school buildings. 3 credits.

641. Surveys and Field Studies. The theory, techniques, procedures, and results of school surveys and field studies. Written field study report required. Prerequisite: Ed. 615. 3-9 credits.

649. Elementary School Administration. Responsibilities of elementary school principal; relationships between teacher, principal, superintendent, and board of education; elementary school program; special learning aids; pupil accounting; use and care of school facilities; non-teaching staff. Prerequisite: One year of teaching experience. 3 credits.

650. School Law. Statutes and judicial decisions affecting public education in Minnesota and other states. Legal authority, powers, and liabilities of school personnel with respect to school finance, curriculum, property, contracts, pensions, tenure, etc. 3 credits.

674. Educational Administration. Administration in United States, problems related to participation of federal government in education, organization and duties of state departments of education, types of school districts, major activities of boards and superintendents of local school units. 3 credits.

676. Secondary School Principalship. For students preparing for administration of secondary schools, principles and practices in organization and administration of secondary schools. 3 credits.

677. Personnel Administration in Education. Theories and principles of school personnel administration; personnel policies and procedures; selection, appointment, and orientation; salary policies, evaluation, and professional welfare. 3 credits.

696. Elementary School Supervision. Organization, purposes, and procedures for supervision; study of teaching-learning situations, with emphasis upon principal's function in diagnosis and improvement of instruction. Prerequisite: One year of teaching experience. 3 credits.

698. Seminar in School Administration. Problems facing principals in organization and administration of schools. Areas of emphasis determined by needs and members of seminar. Open only to experienced teachers and principals. Prerequisite: One year of teaching experience. 1-4 credits.

699. Master's Thesis. 3-9 credits.

ELEMENTARY EDUCATION

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

521. Analysis and Correction of Reading Disabilities. Causes of reading difficulties, procedures to diagnose and correct them. Relationship to disabilities of vision, hearing, speech, intelligence, preference, health, readiness, home environment, school environment. Prerequisite: One year teaching experience and a course in developmental reading. 3 credits.

COURSES FOR GRADUATE STUDENTS

623. Practice in Analysis of Reading Disabilities. Clinical experience in administration and interpretation of techniques in diagnosing reading disabilities. Prerequisite: 421-521 and department approval. 3 credits.

625. Practice in Correction of Reading Disabilities. Clinical experience in correction of reading disabilities. Prerequisite: 623 and by department approval. 3 credits.

648. Seminar in Elementary Education. Prerequisite: One year of teaching experience. 1-4 credits.

651. Elementary Language Arts. Activities and procedures for improving instruction in the language arts. Analysis and evaluation of literature, research findings, and curriculum

materials in the language arts curriculum. Prerequisite: One year of teaching experience. 3 credits.

652. Elementary Science. Activities and procedures for improving instruction in science instruction. Analysis and evaluation of literature, research findings, and curriculum materials in the science curriculum. Prerequisite: One year of teaching experience. 3 credits.

653. Elementary Social Studies. Activities and procedures for improving instruction in the social studies. Analysis and evaluation of literature, research findings, and curriculum materials in the social studies curriculum. Prerequisite: One year of teaching experience. 3 credits.

654. Elementary Mathematics. Activities and procedures for improving instruction in mathematics instruction. Analysis and evaluation of literature, research findings, and curriculum materials in the mathematics curriculum. Prerequisite: One year of teaching experience. 3 credits.

655. Elementary Education. Problems, conditions, and issues relating to elementary education. Analysis and study of contemporary trends and practices in organization, curriculum, materials, evaluation and reporting procedures, and articulation. Prerequisite: One year of teaching experience. 3 credits.

656. Diagnostic and Remedial Teaching. Diagnostic and remedial techniques used in teaching, reading, spelling, handwriting, fundamentals of English and arithmetic. Prerequisite: One year of teaching experience. 3 credits.

658. Reading Research. A study of research methods and current research regarding the reading process and reading related areas. 3 credits.

660. Elementary Curriculum. Historical development; current issues and trends; sociological and psychological foundations; organization; programs and procedures of curriculum improvement stressing roles of teacher and administrator. Prerequisite: One year of teaching experience. 3 credits.

662. Kindergarten, Primary Education. Activities and procedures to improve the teaching and use of materials in kindergarten and primary program. Prerequisite: One year of teaching experience. 3 credits.

679. Unit Teaching in Elementary School. Philosophy underlying unit teaching; practical suggestions for planning, organizing, and developing a unit of work with children. Relation of unit teaching to total school program. Prerequisite: One year of teaching experience. 3 credits.

699. Master's Thesis. 6-9 credits.

SECONDARY EDUCATION

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

549. The Student, the Teacher, and the Law. Statutes and legal decisions affecting teachers and students in the public schools of the United States. Certification, contracts, tenure, teacher authority and liability with respect to students, curriculum, school property, and other related topics will be studied. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

635. Junior High School Theories and Practices. Introduction to the field of junior high school education, including a survey of its functions, philosophy and development; study of the current theories and practices in the education of early adolescents. 3 credits.

661. Secondary Curriculum. Historical development; current issues and trends; sociological and psychological foundations, theories of secondary school education; organization; programs and procedures of curriculum improvement stressing role of teacher. 3 credits.

665. Junior High School Seminar. Problems and issues related to teaching and learning in

the modern junior high school; areas of emphasis determined by the needs and interests of the members of the seminar. 3 credits.

675. Improvement of Secondary School Instruction. Learning principles at adolescent level, curriculum, planning for classroom instruction, managing a classroom, conducting individual and group work, using instructional materials, study and work habits. 3 credits.

699. Master's Thesis. 3-9 credits.

SPECIAL EDUCATION

EDUCATION COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

572. Cultural Diversity and Education. Problems of cognitive, linguistic, social, and emotional development. Problems of measurement. Pre-school, elementary and secondary school programs. Role of supportive agencies. 3 credits.

573. Behavior Problems in the School. Behavior problems in school programs including types of problems, etiology, and management. Role of other agencies. Parental consultation. 3 credits.

574. Education of Trainable Mentally Retarded Children. Evaluation and planning for trainable mentally retarded. Analysis of materials and methods to be employed with trainable mentally retarded in public schools, institutions, and day activity centers. Observation and participation. Prerequisite: Psychology 262. 3 credits.

575. Teaching Basic Skills to Handicapped Learners. Principles of teaching basic skills and their application to the development of skills in handicapped learners. 3 credits.

581. Education of the Gifted. Identification and characteristics; psychological factors; educational provisions and procedures with focus on improvement of instruction; recent studies and surveys. 3 credits.

582. Methods and Materials in Special Education I. Selection of children and organization of school programs for mentally retarded and orthopedically handicapped children. Supportive services. Curriculum adjustment, teaching methodologies and special procedures. 3 credits.

583. Methods and Materials in Special Education II. Intensive analysis of curricular materials to be used with mentally retarded and orthopedically handicapped children. Techniques of presentation. Parent counseling. Observation and participation. Prerequisite: Ed. 482-582. 3 credits.

589. Orthopedic Handicaps in the School. Characteristics, etiology, treatment, and prognosis of the various types of orthopedic handicaps. Role of the auxiliary services and other professions. 3 credits.

590. Education of Children with Learning Disabilities. Introduction to the field of learning disabilities. Survey of various approaches to the instruction of learning disabled children. Laws and regulations governing Minnesota's special learning disability program. 3 credits.

591. Special Learning Disabilities I. Language problems and deficits related to learning in children. Techniques of diagnosis, evaluation and treatment for more efficient instruction. 3 credits.

592. Special Learning Disabilities II. Learning problems associated with emotional and neurological problems in children especially those related to perception. Analysis and diagnosis of perceptual disorders. Procedures for teaching children with perceptual disorders. Observation and participation. Prerequisite: Ed. 491-591. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

613. Administration of Special Education. Role of Special Education Administration in school management system. Planning, programming, and evaluating service delivery systems. Local, state and federal resources. 3 credits.

621. Practicum in Special Education. Supervised teaching in a special education program

for the mentally retarded, orthopedically handicapped, vocational programs or college. Prerequisite: Permission of Department. 3-8 credits.

622. Practicum in Special Learning Disabilities. Supervised practicum in teaching children with learning disabilities to be taken concurrently with Ed. 491-591 and Ed. 492-592. May be repeated to a maximum of 6 credits. 3-6 credits.

623. Practicum in Special Education Administration. Supervised experience in the schools with directors of Special Education. Prerequisite: Education 686 or concurrent registration. 3 credits.

680. Current Trends in Special Education. Current trends in special education including methods and materials, assessment procedures, and innovations in service systems. An introductory course for graduate students. 3 credits.

681. Behavioral Analysis for Handicapped Children. Analysis of symptom development and educational problems in handicapped children according to the principles of learning. Prerequisites: Psychology 663 and permission of department. 3 credits.

682. Research in Special Education. Techniques and interpretations of research in special education. Problem definition, research design, reporting results. 3 credits.

683. Assessment of Psycholinguistic Abilities. Theory and structure of instruments measuring psycholinguistic abilities. Techniques of administration and interpretation. Implication for remediation of disabilities. Prerequisite: Permission of Department. 2 credits.

684. Problems in Special Education. Seminar in problem and issues relating to programming for exceptional children in the schools. Content determined according to background and interests of the students. 3 credits.

685. Recent Research in Mental Retardation. Trends, implications for planning educational programs for mentally retarded, emphasis on studies in psychology and education. Prerequisites: Ed. 483 and Psychology 473. 3 credits.

686. Supervision of Special Education. Methods, problems of staffing, curriculum development, administrative relationships. Prerequisite: a course in supervision, or Special Education major. 3 credits.

687. Curriculum for Special Education. Problems and changing concepts in planning for the handicapped child in public school programs. Effects of expanding special education programs on the school curriculum. Innovative curricular approaches. Trends of present programs. Prerequisite: Ed. 483-583 or 492-592. 3 credits.

689. Psycholinguistics. Introduction to psycholinguistics. Materials needed to evaluate and remediate language difficulties in children. Symbolic processes involved with emission and interpretation of data. Prerequisite: Permission of Department. 3 credits.

699. Master's Thesis. 3-9 credits.

STUDENT TEACHING

Chairman: Floyd Perry

Graduate Faculty: Perry

COURSES FOR GRADUATE STUDENTS ONLY

600. Elective Teaching. Supervised laboratory experience in any of the following areas: teaching, guidance, school administration, supervision of instruction. Prerequisite: Two years successful teaching experience. 2-4 credits.

605. Internship. A full year of on-the-job supervised teaching as part of the fifth year or Master's degree available to selected, mature, certified, beginning teachers. Participants selected jointly by college and participating public schools. Workshops and seminars will be conducted by the college to supplement the experience. Supervision provided by a master teacher and college supervisor. 3 credits each registration; maximum 9 credits.

612. Student Teaching. Supervised secondary and post-secondary teaching for students preparing to teach in grades 7-14. Assignment will be in a public educational institution. Prerequisite: Psychology 563 and Education 561 or equivalent. 16 credits.

HEALTH, PHYSICAL EDUCATION AND RECREATION

Chairman: John Kasper

Graduate Faculty: Kasper, Bleick, Buckley, Kelly and Whitlock (Directors. Graduate Education in Physical Education), Osendorf, Serdula, Troyer, Waxlax, Whitlock.

MASTER OF SCIENCE — Health and Physical Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, and he must have completed an undergraduate minor or equivalent of at least 36 quarter hours of credit in health or physical education. In some cases, the applicant may be required to complete additional undergraduate work even though he may have completed a major or minor.

An applicant may select either the health education track or the physical education track. A minimum of 24 credits must be taken from courses within the selected track areas. Some courses in related fields will also be accepted with the consent of the adviser.

Under Plan B, candidates are required to write a starred paper in conjunction with a graduate health education or physical education course of their own choosing. The paper shall be a detailed study and shall follow the style manual available through the Graduate Studies Office. Further, in addition to the final written comprehensive examination, the candidate will be required to take a final oral examination on this project.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research: Minimum, 3 credits.
Prescribed: Health or Physical Ed. 601: Research Methods in Health and Physical Education, 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only), 6-9 credits.
B. Elective: Selected course work in health and physical education to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits.
A. Prescribed: Psy. 678 Introduction to Graduate Statistics, 3 credits.
B. Electives: Related Fields, General Studies Core or courses in the major (consent of adviser).
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

PHYSICAL EDUCATION

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

511. Organization and Development of Physical Education in the Elementary School. Principles, problems, and procedures. Open to 4-year elementary graduates. 4 credits.

512. History and Philosophy of Physical Education. Role of physical education in the life of primitive and ancient societies to the present. Impact of program in foreign countries on the program of this country. 3 credits.

515. Organization and Administration of Intramural Sports. Methods and materials of intramural sports program in public schools. Content of program. Methods of organizing competition, regulations governing play, outcomes, and awards. 3 credits.

540. Camping Administration. Organization and administration of camps; program planning; selection and training of staff; camp site selection and development; health and safety. 3 credits.

541. Outdoor Education. Development in outdoor education; instructional principles of outing activities and outdoor education program materials and methods. 3 credits.

550. Secondary Curriculum and Administration of Physical Education. Organization and administration of secondary programs in physical education. 4 credits.

551. Adapted Physical Education. Common disabling conditions of the exceptional child and the organization and administration of the physical education program in order to meet their needs. Prerequisite: HPE 348. 3 credits.

556. The Administration of Interscholastic Athletics. History and objectives of high school athletics; local organization, state and national control over high school athletics; safety and sanitation in athletics. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Health and Physical Education. Selection of research topics, methods of searching the literature, test construction, descriptive methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 credits.

607. Principles of Movement. A study of the scientific principles that form the basis for developing a complete concept and understanding of human movement. 3 credits.

608. Principles and Philosophy of Physical Education. Biological, sociological, and psychological interpretations of physical education. Philosophical concepts from ancient Roman and Greek cultures to present. 3 credits.

609. Sport and Society. The inter-relationship of sports and athletics with other aspects of culture. Emphasis is on the Twentieth Century. Prerequisite: HE 412-512 or consent of instructor. 3 credits.

610. Comparative Physical Education. A study of physical education in other parts of the world with emphasis on methods of instruction, objectives and types of activities. Selected countries will be studied in depth. 3 credits.

613. Supervision of Instruction in Health and Physical Education. Planning; teacher qualifications, conducting conferences with health and physical education teachers. 3 credits.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prerequisite: P.E. 349 or 449. 3 credits.

631. Seminar in Physical Education. Problems of teachers engaged in teaching or supervising physical education in the public schools. 3 credits.

633. Readings and Research in Physical Education. 1-4 credits.

635. Theory of Dance. History, principles, theory, and philosophy underlying dance from primitive times to the present. 3 credits.

652. Tests and Measurements in Physical Education. Critical study of tests and measurements available in physical education; methods of constructing and evaluating new tests and measurements. 3 credits.

654. Advanced Theory of Competitive Athletics. Practical problems associated with coaching and training a competitive athlete through high school and college years. No one sport will be stressed. Physical, intellectual, and psychological phases of athlete's life contingent on high performance. 3 credits.

660. Administration of Physical Education. Facilities, equipment, space, time, costs, etc. involved in promotion of a physical education program. 3 credits.

661. Planning Physical Education Facilities. Principles, terminology, and standards for planning construction, use, and maintenance of facilities. 3 credits.

699. Master's Thesis. 6-9 credits.

HEALTH EDUCATION**COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS**

515. Health Education Curriculum Development. Organization and development of a school health education curriculum and consideration of courses of study, K-12; legal basis; distinction between curriculum and course of study; techniques for course of study construction. Laboratory work. Prerequisites: H.E. 210, 215, 301, 315, 481 or consent of instructor. 4 credits.

581. Human Sexuality. Body growth and development, reproduction, and heredity. Role of the home, church, school and community in family life education, dating and courtship, marriage and family living. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Health and Physical Education. Selection of research topics, methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 credits.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prerequisite: P.E. 349 or 499. 3 credits.

630. Seminar in School Health Education. Problems confronting teachers engaged in teaching or supervising health education in public schools. 3 credits.

632. Survey of Recent Research in the Field of Health. Readings and discussions of recent studies and authentic reports in various areas of health interest. 3 credits.

637. Practicum I. Supervised experience in an off-campus setting peculiar to the student's needs. Prerequisite: Consent of Instructor. 1 credit.

638. Practicum II. Supervised experience in an off-campus setting peculiar to the student's needs. Prerequisite: Consent of Instructor. 1 credit.

639. Practicum III. Supervised experience in an off-campus setting peculiar to the student's needs. Prerequisite: Consent of Instructor. 3 credits.

644. Orthopedics, Therapeutics, and Correctives. An overview of the field of rehabilitation of physical disabilities. Roles of the health educator, physical educator, and athletic trainer in planning exercise programs to correct these defects when possible. Orthopedic screening procedures as an integral part of the school health program. 3 credits.

699. Master's Thesis. 6-9 credits.

LIBRARY AND AUDIOVISUAL EDUCATION

Chairman: Luther Brown

Graduate Faculty: L. Brown, Fields, J. Nelson, Ramquist, Savage, Schulzetenberg, Smelser

With the current emphasis on all media formats the Department of Library and Audiovisual Education has developed Master of Science and Specialist degree programs in Information Media to support persons in media (print and non-print — library and audiovisual formats) for all levels of responsibility. Encompassed in the Information Media major at the graduate level and minor at the undergraduate level are concepts dealing with print (book) and non-print (audio, projected, and non-projected) materials. Graduate Information Media majors should expect to become qualified for one or more of the following positions as Media Generalist, Media Supervisor, Consultant-Director-Supervisor of Academic, Public School, and Special Libraries, Audiovisual Centers; Instructional Materials Centers, Media Centers and Systems at the Elementary and Secondary School, and Junior, and Senior college levels as well as Public and Special Libraries.

MASTER OF SCIENCE — Information Media

Programs are available for students who hold a baccalaureate degree. Encompassed in

the Information Media major are concepts dealing with the print (book) and non-print (audio, projected and non-projected) materials. Majors in this area are expected to attain competency in the theory and practice of identification, evaluation, procurement, preparation, organization, and supervision of information materials; therefore, the student will be required to complete a prescribed core of coursework.

Program One is open to holders of baccalaureate degrees and is not restricted to applicants engaged in teaching. It should be noted that this degree is not intended to support initial certification or certificate endorsement. Plans for pursuing work in this program should be developed in consultation with an adviser.

Plan B only; minimum, 51 credits.

- I. Research: Minimum, 6 credits.
Prescribed:
IM 608 Research Methods (or equivalent), 3 credits.
IM 682 Research in Information Media, 2-12 credits.
- II. Major: Minimum, 36 credits.
Prerequisite courses: IM 603 or 468 and 275, or acceptable equivalent.
- III. Related Fields: Maximum, 9 credits (consent of adviser).
Course work selected from: Related Fields, General Studies courses, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.

Program Two is open to holders of a baccalaureate degree who have a current teaching certificate and who wish to obtain certificate endorsement and/or the Master's degree in Information Media. Students eligible to pursue this degree program should consult with an adviser.

Plan B only; minimum, 51 credits.

- I. Research: Minimum, 3 credits.
Prescribed:
IM 608 Research Methods (or equivalent courses), 3 credits.
- II. Major: Minimum, 30 credits.
Prerequisite courses: IM 603 or 468 and 275, or an acceptable equivalent.
- III. Professional Education: Minimum, 9 credits (consent of adviser). Prerequisite: undergraduate or graduate curriculum course on the level for which he has teacher certification in addition to the required nine credits.
- IV. Related Fields: Minimum, 9 credits (consent of adviser). Course work selected from: Related Fields, General Studies courses, Introduction to Graduate Statistics, Interpretation of Research, or courses in the Major.

Graduate students should note that IM 608: Research Methods, or its equivalent must be taken within the first 15 credits of the Master's degree program in Information Media. Thus, the student must have completed IM 608 or its equivalent or be enrolled in IM 608 before he meets the requirements for filing his program for the Master's degree.

SPECIALIST DEGREE — Information Media

The Specialist degree program is available to: (1) those who have completed a Master's degree with a major in some area of media (library or audiovisual education), (2) those who have completed a minimum of 45 graduate credits in some area of media but who have not completed the Master's degree yet are eligible for entrance into the Master's degree program under present entrance requirements or (3) those who have a Master's degree in another area. Each student's program will be designed to meet the individual's interests and needs.

With the exception of those students who have completed the Master's degree in Information Media at St. Cloud State College, all students will be required to take the Graduate Record Examination including the Advanced Section in Education. A minimum grade point average on all graduate work is 3.0. References also are required.

Specialist Degree Program: Minimum, 45 credits.

I. Major: Minimum, 33 credits.

Prescribed:

IM 683, Seminar in Information Media, 2 credits. (Should be included in first enrollment).

IM 684, Field Study, 3-9 credits.

II. Electives: Minimum, 12 credits in supporting areas (consent of adviser).

(The 45 hours must be above and/or after the completion of the Master's degree and the student must have a minimum of 60 graduate credits in media.)

III. The maximum time for completion of the Specialist degree would be five (5) calendar years from the date of the first enrollment for credit applicable to the degree.

Persons interested in the Specialist degree in Information Media should contact an adviser in that department for an interview before entering the program.

STUDENTS SEEKING CERTIFICATE ENDORSEMENT ONLY

Students with baccalaureate degrees who have teacher certification or are eligible for teacher certification may apply for admission to pursue certificate endorsement as school librarians, audiovisual directors, or media generalists. Students with teacher certification and the Master's degree may apply for admission to pursue certificate endorsement as school librarians, audiovisual directors, media generalists or media supervisors. Those with a degree must enroll in graduate level courses. Applicants planning to work toward any certificate endorsement should meet with a graduate adviser in the Department of Library and Audiovisual Education to plan the sequence of courses required. Additional information may be obtained from the Chairman of the Department of Library and Audiovisual Education, St. Cloud State College.

COURSES FOR GRADUATE STUDENTS ONLY

603. Information Media. A beginning course in the nature of information media, the organization and use of materials of all formats and equipment; the opportunities in the field. Laboratory. 4 credits.

604. Information Media in Society. The role of media, personnel, and organization in society. (Not open to information Media majors.) 3 credits.

606. Organization and Supervision of Information Media. An introductory survey of the various facets of organization and supervision of Information Media. 3 credits.

608. Research Methods. Methods of evaluating research procedures and interpreting findings. Defining and delimiting a problem, gathering, documenting, organizing, and presenting findings. 3 credits.

611. Preparation of Information Media. Planning and preparing materials for instructional use; projected and non-projected. Laboratory. 3 credits.

612. Television in Information Media. The operation and use of television in the instructional program. Laboratory. 3 credits.

613. Photographic Processes in Information Media. Use of still and movie photography, photographic darkroom processes and equipment to prepare educational pictures. Laboratory. 3 credits.

615. Media Production I. Planning and preparing materials for instructional use; graphics, lettering, and overhead transparencies. Laboratory. Prerequisite: I.M. 611. 3 credits.

616. Media Production II. Preparation and production of audio and videotapes including lighting, staging, writing, and visuals. Laboratory. Prerequisite: I.M. 612. 3 credits.

618. The Motion Picture in Information Media. The historical background and development of the motion picture. Understanding principles of designing and using motion picture films, the documentary, theoretical, education, experimental and industrial films in education. Laboratory. 3 credits.

619. Cinematography in Information Media. Planning and producing instructional films,

including 8mm, 16mm, and 35mm formats; script writing, equipment operation, lighting, and selection of suitable messages for this medium. Laboratory. 3 credits.

630. Selection and Evaluation of Information Media Materials. Theory, principles, and techniques of evaluation and selection, introduction to the basic tools for selection of information media materials in all subjects and areas. Prerequisite or concurrent enrollment: I.M. 603. 3 credits.

631. Theory and Practice of Media Evaluation and Selection. Theory, principles, and techniques of evaluating and selecting materials and equipment use for formats of media. Prerequisite: I.M. 630. 3 credits.

635. Bibliography and Reference. The theory and practice of bibliographic and reference work; study and evaluation of reference tools and study of bibliographies of information media materials. Prerequisite or concurrent enrollment: I.M. 603. 3 credits.

636. Advanced Bibliography and Reference. The theory of patron information needs and study of specialized bibliographic and reference media materials in subject areas. Prerequisite: I.M. 635. 3 credits.

637. Technical Processes in Information Media I. Organization of media materials for effective service to users; acquisition, cataloging, classification, and preparation of basic media materials. Laboratory. Prerequisite or concurrent enrollment: I.M. 603. 3 credits.

638. Technical Processes in Information Media II. Continuation of the study of information media materials organization with emphasis on the problems of acquisition, cataloging, classification, and preservation of special materials. Laboratory. Prerequisite: I.M. 637. 3 credits.

639. Listening and Viewing Guidance. Materials of varying formats used by children and youth in the learning process, with an emphasis on application through analysis of developmental tasks, reading guidance principles, listening techniques, and viewing procedures. Prerequisite or concurrent enrollment: I.M. 603. 3 credits.

644. Information Storage and Retrieval I. Principles of information storage and retrieval with emphasis on information needs and housekeeping problems of the information media center. Analysis of processing systems, manual, punch-card, and computer application. Laboratory. 3 credits.

645. Information Storage and Retrieval II. Use of the capabilities of computer methods for the storage and retrieval of information. Laboratory. Prerequisite: I.M. 644. 3 credits.

647. Programmed Instruction. The historical development of teaching machines; the psychological background of instructional programs; the selection, utilization, and evaluation of existing programs; and individual experience in planning and producing programs. Laboratory. 3 credits.

648. Computer Assisted Learning. Selected readings on the theory, use, and innovations of CAL. Understanding of selected experimental projects, their purpose, and application and an attempt to design and build a CAL program. Laboratory. 3 credits.

650. Administration of Information Media. Administration of the various types of information media programs. Prerequisite: I.M. 603. 3 credits.

651. Media Organization and Administration I: Patterns and Structure. Patterns and levels of structures in academic, public and school media centers, with an emphasis on the relation of the media structure to the administrative and instructional structure of the institution. 3 credits.

652. Media Organization and Administration II: Personnel and Public Relations. An application of the principles of personnel management in education as applied to media programs; application of standards, and examination of public relations principles and procedures. 3 credits.

653. Media Organization and Administration III: Budgeting and Facilities. An investigation into budgeting practices, the state accounting system, local adaptations to the state system, and the relation of budgeting to planning of media programs, a survey of trends in the planning of media equipment, facilities, and layout. 3 credits.

658. Systems Design and Evaluation of Media I: Media and Individualized Instruction. Principles in design using and evaluating media systems in individualized instruction; practice in designing and using media models in relation to specific individual needs. Laboratory. 3 credits.

659. Systems Design and Evaluation in Media II: Small and Large Group Instruction. Principles in design, using, and evaluating media systems in small and large group instruction. Practice in designing and using media models in relation to specific group needs. Laboratory. 3 credits.

660. History of Information Media. A chronology of events and circumstances in the development of information media. 3 credits.

662. Recent Trends in Information Media. Consideration of the latest trends and thinking of the various areas of information media handling and use. 3 credits.

664. Creativity and Media. The role of materials center in promoting the professional growth of teachers and improving the instructional program. Principles of selection of related materials for professional study and use in the classroom. The innovative use of standard media to enhance teaching. Practice in compiling comprehensive interest and subject bibliographies and cross-media kits. Field trips. Laboratory. 3 credits.

666. Writing for Educational Media. Principles of clarity in writing; writing to report, instruct, and persuade for printed, visual-verbal and listening only media; evaluating the effectiveness of writing in terms of purpose and (specified) audience. Laboratory. 3 credits.

680. Internship in Information Media. Intern experiences relating to information media in all its practical facets. Laboratory. 2-12 credits.

681. Reading in Information Media. Selected readings of literature of the field and related areas. 3 credits.

682. Research in Information Media. Current experiments in information media and closely related fields. 2-12 credits.

683. Seminar in Information Media. Conferences, reports, readings, discussions, problems, and research in a special facet of media. 2-8 credits.

684. Field Study in Information Media. Research problem(s) developed by the student with permission of his adviser and the department chairman. 3-9 credits.

PSYCHOLOGY

Chairman: Jack Knutson

Graduate Faculty: J. Knutson, D. Anderson, Boltuck, Craik, A. Krueger, Kukuk, Lesar (Coordinator, Counselor Education Committee), Lohmann, Luker, Mason, Murphy, Perkins, Prochnow, Redding, Rosenthal, Scharf, VanNostrand

MASTER OF SCIENCE-Counseling Fields

Procedure For Admission To Graduate Programs In Counselor Education

Admission as a graduate student to the Master of Science Program in Counseling follows the student's application for admission to Graduate Studies, admission to the Counselor Education major, and approval by the Counselor Education Committee of the Department of Psychology. Until such time as the Counselor Education Committee takes favorable action on an application, the applicant is classified as a Special Student. Before the Counselor Education Committee will consider an application, the applicant must complete the following:

1. Submit to the Graduate Studies Office the "Application for Admission to Graduate Study."
2. Arrange to have two official copies of undergraduate transcript sent to the Graduate Studies Office (not required of St. Cloud State graduates). These transcripts must be sent by the registrar of the respective undergraduate institutions. If graduate credits are to be transferred, two official transcripts of them are similarly required.

- 3. Complete the graduate test battery and have scores sent to the Graduate Studies Office. The advanced examination in Psychology is not required for the Counselor Education programs.
- 4. Have the following recommendations sent to the Graduate Office as required on the Graduate application.
 - (a) one from a present or former employer.
 - (b) one from a personal friend or business acquaintance.
 - (c) one from a faculty member, either at St. Cloud State or another college.
- 5. Submit to the Counselor Education Committee a brief autobiography to include reasons for deciding to enter the counseling profession.
- 6. Satisfactorily complete the writing examination.

The Graduate Studies Office will formally notify the student of the action of the Counselor Education Committee.

Core Classes in Counselor Education:

The program in Counselor Education is designed to permit the student to select from among several emphases. All emphases include a common core of course work fundamental to the professional activities of counselors. A minimum grade of B is required in each of the Counseling Core courses.

SCHOOL COUNSELING EMPHASIS

Secondary School Counseling.

In addition to the Graduate Studies requirements, prospective students must fulfill all additional requirements stipulated by the Counselor Education Committee (described under Master of Science — Counseling above).

To enroll in the Secondary School Counseling program, a student must hold or be eligible for a teacher's certificate.

For secondary school counseling certification in Minnesota, the following are required:

- 1. Endorsement from the counselor preparing institution. (For endorsement from St. Cloud State College, the student must complete all requirements for the Master's degree and be approved for endorsement by the Counselor Education Committee.)
- 2. Minnesota Teaching certificate.
- 3. One year of successful teaching experience.
- 4. One year of work experience outside of teaching.

The following program meets the requirements of the Minnesota State Department of Education for certification as a secondary school counselor:

Plan A, 45 credits; Plan B, 48 credits.

- I. Research: Minimum, Plan A, 6 credits; Plan B, 12 credits.

Plan A: Prescribed

- Psych 678 Introduction to Graduate Statistics 3 credits
- Psych 699 Master's Thesis 3-6 credits

Plan B: Prescribed

- Psych 678 Introduction to Graduate Statistics 3 credits
- Psych 677 Seminar in Counseling 3 credits
- Psych 679 Seminar: Research Design 3 credits
- Psych 689 Seminar: Research Reporting 3 credits

- II. Major: Minimum; 30 credits.

A. Prescribed; Counseling Core; Minimum, 18 credits.

- Psych 651 Counseling Theories 3 credits
- Psych 665 Appraisal Techniques 3 credits
- Psych 667 Occupational & Educational Information 3 credits
- Psych 668 Counseling Procedures 3 credits
- Psych 669 Supervised Practicum in Counseling 6 credits

(A minimum grade of B is required in each of the Counseling Core courses.)

B. Prescribed: Minimum, 12 credits.

- Psych 564 Guidance Principles 3 credits

Psych 666 Small Group Counseling Process	3 credits
Psych 571 Mental Hygiene	3 credits
or	
Psych 585 Theory of Personality	3 credits

C. Electives: Minimum, 3 credits.

- III. Electives: Minimum; Plan A, 9 credits; Plan B, 6 credits of Professional education courses (consent of adviser).

REHABILITATION COUNSELING EMPHASIS

The candidate for the Master of Science degree with an emphasis in Rehabilitation Counseling must fulfill the requirements of the Graduate School and of the Counselor Education Committee of the Psychology Department as described under Master of Science - Counseling. See page 59.

Students with minimum experience in vocational rehabilitation should expect to compensate through taking courses beyond the minimum requirements.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research: Minimum, Plan A, 6 credits; Plan B, 6 credits.
 Prescribed:
 Plan A only:
 Psych 678 Introduction to Graduate Statistics 3 credits
 Psych 699 Master's Thesis 3 credits
 Plan B only:
 Psych 678 Introduction to Graduate Statistics 3 credits
 Elective: Minimum, 3 credits (consent of adviser).
- II. Major: 22-38 credits.
 A. Prescribed:
 Counseling Core; Minimum, 15 credits.
 Psych 651 Counseling Theories 3 credits
 Psych 665 Appraisal Techniques 3 credits
 Psych 667 Occupational & Educational Information 3 credits
 Psych 668 Counseling Procedures 3 credits
 Psych 669 Supervised Practicum in Counseling 3-6 credits
 (A minimum grade of B is required in each of the counseling core courses).
 Rehabilitation Counseling Emphasis; Minimum, 7 credits.
 Psych 650 Introduction to Rehabilitation 3 credits
 Psych 652 Seminar: Medical Factors in Rehabilitation 2 credits
 Psych 653 Psychological and Sociological Aspects of Disability 2 credits
 B. Elective:
 Psych 696 Supervised Internship in Counseling 1-16 credits
- III. Electives: Plan A, 1-17 credits; Plan B, 4-20 credits (consent of adviser).

EMPLOYMENT COUNSELING EMPHASIS

In addition to the Graduate School requirements, prospective students must fulfill all requirements stipulated by the Counselor Education Committee as described under Master of Science Counseling above.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research: Minimum, Plan A, 6 credits; Plan B, 9 credits.
 Prescribed:
 Plan A:
 Psych 678 Introduction to Graduate Statistics 3 credits
 Psych 699 Master's Thesis 3 credits
 Plan B:
 Psych 677 Seminar in Counseling 3 credits
 Psych 678 Introduction to Graduate Statistics 3 credits
 Elective: Minimum, 3 credits; (consent of adviser).

II. Major: 18-34 credits.

A. Prescribed:

Counseling Core; Minimum, 15 credits.

Psych 651 Counseling Theories 3 credits

Psych 665 Appraisal Techniques 3 credits

Psych 667 Occupational & Educational Information 3 credits

Psych 668 Counseling Procedures 3 credits

Psych 669 Supervised Practicum in Counseling 3-6 credits

(A minimum grade of B is required in each of the counseling core courses.)

Employment Counseling Emphasis; Minimum, 3 credits.

Psych 675 Employment Counseling Seminar, 3 credits.

B. Elective:

Psych 696 Supervised Internship in Counseling 1-16 credits

III. Electives: Plans A and B, 5-21 credits (consent of adviser).

GENERAL COUNSELING EMPHASIS

In addition to the Graduate School requirements, prospective students must fulfill all requirements stipulated by the Counselor Education Committee as described under Master of Science - Counseling. See page 59.

Plan A, 45 credits; Plan B, 48 credits.

I. Research: Plan A or B, Minimum, 6 credits.

Plan A, Prescribed:

1. Psych. 678 Introduction to Graduate Statistics 3 credits

2. Psych. 699 Master's Thesis. 3-6 credits

Plan B, Prescribed:

1. Psych 678 Introduction to Graduate Statistics 3 credits

2. Elective in Research, 3 credits (consent of adviser).

II. Major: Minimum, 15 credits.

Prescribed: Counseling Core.

Psy. 651 Counseling Theories 3 credits

Psy. 665 Appraisal Techniques 3 credits

Psy. 667 Occupational and Educational Information 3 credits

Psy. 668 Counseling Procedures 3 credits

Psy. 669 Supervised Practicum in Counseling 3-6 credits

(A Minimum grade of B is required in each of the Counseling Core Courses.)

III. Electives:

Plan A, Minimum, 24 credits; Plan B, Minimum, 27 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

530. Seminar: _____. (Selected topic in special areas in psychology.) May be repeated. 1-4 credits.

564. Guidance Principles. Philosophy of guidance, individual appraisal, counseling services, informational services, placement organization, group guidance activities, staff service and contributions, and program organization and administration. 3 credits.

566. Guidance for the Handicapped. Special problems. Counseling with children and parents. Psychological, aptitude, achievement tests. 3 credits.

568. Psychological Measurement. Methodology and content in the assessment of human behavior; survey of individual and group tests; intelligence, special aptitudes, and achievement. Knowledge of descriptive statistics presumed. 3 credits.

569. Individual Appraisal. Methods of individual appraisal; psychological measurement of individuals; instruments used to appraise intellectual efficiency, aptitude and achievement, sensory capacities and efficiency, sensory-motor coordination, group status, personal history; synthesizing data and report writing. Prerequisite: Psy. 463 or Psy. 468-568. 3 credits.

- 571. Mental Hygiene.** Characteristics of wholesome personality, methods and aims of mental hygiene; personal development and techniques of effective adjustments. Prerequisite: Psy. 262. 3 credits.
- 572. Psychology of Exceptional Children.** Clinical observation of children who have special problems of growth and development, physical and mental handicaps; mentally gifted; behavior disorders. Prerequisite: Ed. 471-571 for B.S. students; Psy. 441 or 443 for B.A. students. 3 credits.
- 573. Psychology of Mental Retardation.** Etiology, characteristic, classification, diagnosis, assessment. Social control. Role of family, school, community agencies. Prerequisite: Ed. 471-571 for B.S. students; Psy. 441 or 443 for B.A. students. 3 credits.
- 574. Interpersonal Dynamics.** Survey of research, experimentation, and theory of relationships between the individual and the group; inter-personal communication, influence, group structure and function, leader-member relations. 3 credits.
- 575. Abnormal Psychology.** Functional and organic deviations for understanding normal behavior of human personality with greater clarity and precision. 3 credits.
- 576. Introduction to Clinical Psychology.** Overview of the clinical approach to assessment of individuals and techniques for behavioral change as used in clinical, educational, and industrial settings. Prerequisite: Psy. 475-575. 3 credits.
- 582. Motivation.** Theory and research in animal and human motivation; physiological, social, and personal aspects of motivation; basic, deficit, derived, growth motivation. 3 credits.
- 583. History and Schools.** Systems, experiments, personalities in the development of modern psychology; comparative study and analysis of systems; contribution of outstanding persons. 3 credits.
- 585. Theory of Personality.** Basic theoretical concepts, factors of vital relationships within the individual personality, interpersonal relationships, individual and field frames of reference as they relate to mental health. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

- 621. Psychology in Human Affairs.** Examination of the broad principles of psychology and their impact on human affairs; nature of man, mind and body, basis of knowledge, basis for conduct; relation between psychological thinking and other modes of inquiry. Not open to students majoring in Counseling or Psychology. 3 credits.
- 640. Introduction to Elementary School Guidance.** An overview of current practices in guidance at the elementary school level; guidance services including human relations, coordination, consultation, diagnosis, and other developmental skills necessary to the counselor's role in an elementary school setting. 3 credits.
- 650. Introduction to Rehabilitation.** Orientation to the rehabilitation process including a survey of the history, principles, philosophy and legal aspects of rehabilitation and related fields. 3 credits.
- 651. Counseling Theories.** Consideration of selected theories of counseling with some consideration given to methods, techniques, and application in various counseling settings. Taken prior to or concurrently with Psychology 668. 3 credits.
- 652. Seminar: Medical Factors in Rehabilitation.** 2 credits (may be repeated).
- 653. Psychological and Sociological Aspects of Disability.** 2 credits (may be repeated).
- 654. Rehabilitation Plan Formulation.** The process of the study of the client; the formulation of the plan for rehabilitation and its implementation. 1 credit.
- 655. Seminar in Rehabilitation Counseling: _____.** Special topics in the field. May be repeated. 1-3 credits.
- 656. Placement Services in Counseling.** Developing placement of clients consonant with the plan. 1 credit.
- 663. Applied Theories of Learning.** Principles of psychology of learning and experimental

findings; application to problems encountered in teaching and learning; examination of theories of learning. 3 credits.

664. Learning Theories. Advanced course in theories of learning with emphasis on models, systems, research findings and current issues. Prerequisite: Psychology 350 or Psychology 678 and graduate status in Psychology or permission of the department chairman. 3 credits.

665. Appraisal Techniques. Analysis of appraisal techniques used in Guidance and Counseling. Information, sources, assembly, and use in the counseling process. Prerequisite: 464-564, 678. 3 credits.

666. Small Group Counseling Process. Didactic instruction in small group process and practice in such process under the leadership of a staff member. Lecture and laboratory. 3 credits.

667. Occupational and Educational Information. Occupational and educational information and materials. Sources, evaluation, collection, and filing of occupational and educational information and materials, proper use and place in total guidance program. Prerequisite: 464-564. 3 credits.

668. Counseling Procedures. Various approaches in counseling, practice in interviewing, concepts of therapy, analysis of attitudes in counseling. Prerequisite: 665. 3 credits.

669. Supervised Practicum in Counseling. Prerequisite: 668 and Counselor Education Committee approval. Required of all students in Counselor Education: School. Employment and Rehabilitation Counseling. 3-6 credits.

670. Developmental Psychology. Advanced course in human growth and development, emphasis on trends, problems, theoretical considerations, and contemporary research. 3 credits.

675. Employment Counseling Seminar. An examination of issues and trends in Employment Counseling. Problems encountered by employment counselors will be studied independently by seminar members. 3 credits.

677. Seminar in Counseling. For majors in counseling. Integration of course work in the field of counseling; problems in counseling; theoretical issues, and recent research in the broad field of counseling. May be repeated. 3 credits.

678. Introduction to Graduate Statistics. A review and extension of correlation and regression analysis; introduction of probability and sampling theory; estimating population parameters; testing hypothesis. Prerequisite: Psy. 350 or 463. Familiarity with descriptive statistics assumed. 3 credits.

679. Seminar: Research Planning. For majors in counseling. Planning research appropriate for meeting Master's Degree research requirement; development of project outlines and presentation for critical review to members of the seminar. Prerequisite: 677. 3 credits.

680. Organizational Psychology. Psychology of individual and group behavior in the organizational complex; contemporary research and implications for administration and management; motivation, influence, communication, group processes, leadership, supervision. 3 credits.

681. Inferential Statistics I. Set mathematics, probability theory and statistical inference, linear correlation and regression, and the design and analysis of single factor experiments. Prerequisite: Psychology 351 or Psychology 678 or permission of the chairman. 4 credits.

682. Inferential Statistics II. Experimental blocking and covariance, multiple correlation and regression, curvilinear correlation and regression, and the design and analysis of multivariate experiments. Prerequisite: Psychology 681. 4 credits.

686. Binet. Measurement of intelligence by means of the Stanford revision of the Binet-Simon technique; demonstrations, lectures, practice in administration of tests; observation of individual instructor. Admission by Department approval. 3 hours laboratory. 3 credits.

687. Wechsler. Measurement of intelligence by means of the Wechsler Adult Intelligence Scales, Wechsler Intelligence Scale for Children, and Wechsler Intelligence Scale for Adults and Adolescents, administering, scoring, and interpreting results. Admission by Department approval. 8 hours laboratory. 3 credits.

689. Seminar: Research Reporting. For majors in counseling. Reporting of research planned in Psy. 679 and subsequently undertaken; preparation of reports in accordance with APA and APGA publication standards and presentation to seminar. Prerequisite: 679. 3 credits.

696. Supervised Counseling Field Experience. Prerequisite: 668 and Counselor Education Committee approval. 1-16 credits.

698. Practice in Small Group Process. Supervised practicum in conducting small group counseling sessions. Prerequisite: 666. No exception to this prerequisite requirement. 3 credits.

699. Master's Thesis. 3-6 credits.

SCHOOL OF FINE ARTS

H. Beresford Menagh, Dean

ART

Chairman: James Roy

Graduate Faculty: Roy, Aiken, Alhelm, D. Brown, Coen, Ellingson, Gutteter, Halberg, Korte, Riseling, Rudans, Wallin

MASTER OF ARTS

The applicant for admission to this program must have the equivalent of an undergraduate major in Art. For unconditional admittance, he must have an undergraduate honor point ratio of 2.8 or above; applicants whose undergraduate honor point ratio is less than 2.8 may be admitted conditionally. The applicant also must submit a portfolio of original work. Contact the Chairman, Department of Art, for specific instructions of what should be included in the portfolio and how it should be submitted.

At the completion of the Creative Works Exhibition, works of art may be selected by the adviser to become property of the departmental permanent collection.

At least 15 credits must be earned in art courses in which enrollment is limited to graduate students.

Plan A only: Minimum, 46 credits.

I. Courses in Art

Minimum 18 credits in major field in Art.

Minimum 9 credits in minor field in Art.

Minimum 12 credits in Art History.

Minimum 4 credits in Philosophy of Art.

Minimum 3 credits, Creative Work. (698)

II. A quarterly review of studio work completed in the major field of study must show satisfactory achievement.

MASTER OF SCIENCE - Art Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in Art in order to choose it as his major at the graduate level. In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though he may have completed an undergraduate major or minor.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A only: Minimum, 46 credits.

I. Research: Minimum, 3 credits.

Ed. 615 Introduction to Research, 3 credits
or

Art 685 Research in Art Education, 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed:

1. Art 687 History of Art Education in Europe and America, 2 credits.

2. Art 699 Master's Thesis (Plan A only). 3-9 credits.

III. Related Fields: Plan A, 6 credits; (Credits to be selected with the major adviser from related fields; General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)

IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).

V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

530. Ancient and Classical Art. The art of the great ancient civilizations including Egyptian, Mesopotamian, Aegean, Greek, Etruscan, and Roman. Prerequisite: Art 320. 4 credits.

531. Early Christian and Medieval Art. Christian art from the catacombs of Rome to the Gothic Cathedrals of Western Europe and the art of the Byzantine Empire. Prerequisite: Art 320. 4 credits.

532. Renaissance Art. The art of the Italian Renaissance beginning with Giotto and including the masters of 15th and 16th century northern Europe. Prerequisite: Art 320. 4 credits.

533. Baroque and Rococo Art. European Art of the 17th and 18th Centuries including El Greco, Rembrandt, Bernini, etc. Prerequisite: Art 320. 4 credits.

534. European 19th Century Art. Neo-Classicism, Romanticism, Realism, Impressionism, and Postimpressionism are emphasized. Prerequisite: Art 320. 4 credits.

535. History of American Art I. Art of America from the Indian cultures through the United States of the pre-Civil War period. 4 credits.

536. History of American Art II. Painting, sculpture, architecture, prints, and crafts from the Civil War to present. 4 credits.

537. Modern Art. The great modern movements of the 20th century including Fauvism, Cubism, Constructivism, de Styl, Dada, Surrealism, Abstract Expressionism, etc. Also includes innovations in architecture such as those associated with the Bauhaus. Prerequisite: Art 320, 4 credits.

538. Non-Western Art History. Non-western cultures including India, China, Japan, and Russia. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

615. Life Drawing I. Practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 credits.

616. Life Drawing II. Advanced practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 credits.

620. Advanced Theory. Foundations of criticism, form analysis, psychology, and philosophy of art. 4 credits.

630. Art Seminar. Lectures, readings and discussions on selected artists and their works. 2-4 credits.

641. Painting I. Advanced expression in the painting media; organization, color and technique. Prerequisite: 2 undergraduate courses in painting or permission of the department chairman. 3-9 credits.

642. Painting II. Continued work in painting media leading to development in individual expression. Prerequisite: 541. 3-9 credits.

643. Watercolor Painting. Practice in transparent watercolor painting, casein, tempera, and combined media. 2-6 credits.

651. Prints and Composition I. Advanced experience in printing methods and composition. Developing previously learned techniques. Prerequisite: 2 undergraduate courses in printmaking or permission of the department chairman. 3-9 credits.

652. Prints and Composition II. Advanced experiences in printing methods and composition. Intense concentration in a selected printing method. Prerequisite: 651. 3-9 credits.

661. Sculpture I. Advanced work in three-dimensional organization of form; individual concentration toward competent expression in sculpture media. Prerequisite: 2 undergraduate courses in sculpture or permission of the department chairman. 3-9 credits.

662. Sculpture II. Continued work in sculpture media with emphasis on casting metals. Prerequisite: 661. 3-9 credits.

671. Ceramics I. Advanced expression in the ceramics media including firing techniques.

Prerequisite: 2 undergraduate courses in ceramics or permission of the department chairman. 3-9 credits.

672. Ceramics II. Continued work in the ceramic media with emphasis on the chemistry of glazes and the design and construction of kilns. Prerequisite: 671. 3-9 credits.

676. Fibers. Advanced creative experiences in design and production on various looms; characteristics of looms, principles of textile construction, and materials of the weaver. Prerequisite: 2 undergraduate courses in weaving or permission of the department chairman. 3-9 credits.

681. Metals. Advanced experience in jewelry design, silversmithing, and casting by the lost wax method. Prerequisite: 2 undergraduate courses in jewelry and enameling or permission of the department chairman. 3-9 credits.

682. Metals II. Advanced experiences in jewelry design, silversmithing, and casting by the lost wax method. Prerequisite: Art 681. 3-9 credits.

685. Research in Art Education. Current experiments in art education and closely related fields. Required of students working for a Master's degree in art. 3 credits.

686. Current Problems in Art Education. Statement, analysis and evaluation of art problems evidenced in contemporary living, in school, home, and community. 3 credits.

687. History of Art Education in Europe and America. Historical development of philosophies in art education in the United States and Europe. Required for students working for a Master's degree in art. 2 credits.

696. Supervision of Elementary School Art. Methods and practices of supervision in relation to art programs in the elementary school. Prerequisite: 290, 390, 490. 3 credits.

697. Art for the Exceptional Child. The role of creative art activity for the exceptional child. To include the physically and mentally handicapped as well as the gifted child. Prerequisite: 290, 390, 490. 4 credits.

698. Creative Work. 3-9 credits.

699. Master's Thesis. 3-9 credits.

MUSIC

Chairman: David Ernest

Graduate Faculty: Ernest, Barrett, Echols, Flom, Frohrip, Gyllstrom, J. Johnson, Schrader
St. Cloud State College is a member of the National Association of Schools of Music.

MASTER OF SCIENCE - Music Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, must have completed at least an undergraduate minor in Music, and must meet the admission requirements of the Office of Graduate Studies. When an applicant holds a minor in Music, additional undergraduate course work will be required to bring the student to a major program level. Acceptance into a graduate program is determined by musical knowledge, experience and performance.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

I. Research.

Music 609 Introduction to Research in Music Education (or equivalent course), 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed:

1. Music 620 Analytical Technique, 4 credits.

2. Music 665, 666, 669, 671, 672, 673, or 674 (private lessons), 4 credits.

3. Music 610 Curriculum Development, 4 credits.

4. Music 615 Music Literature I, 4 credits.

5. Music 699 Master's Thesis (Plan A only), 1-6 credits.
- B. Electives: Selected course work in music to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major advisor from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major).
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 506. Acoustics of Music.** Nature of sound and its application in music; characteristics of sound waves; vibratory sources of music sounds; physical basis of harmony and scales. Prerequisite: Music 205. 2 credits.
- 507. Composition I.** The utilization of harmonic and contrapuntal techniques in developing original composition in various forms. Prerequisite: Music 205. 2 credits.
- 508. Composition II.** A continuation of Music 507. Prerequisite: Music 507. 2 credits.
- 521. Contemporary Music.** Trends in European and American music from about 1910 to the present day. Particular emphasis placed on music since 1920. Works by Stravinsky, Schoenberg, Bartok, Hindemith, Webern, Berg, Varese, and Stockhausen will be examined in detail. Prerequisite: Music 222 and 223. 2 credits.
- 522. Choral Literature.** Three basic areas of vocal repertoire. The art-song, the large vocal forms, and opera. An evaluation of the aesthetic, stylistic, musical and dramatic principles and their application in works from the 18th century to present. Prerequisite: Music 222 and 223 or permission of department. 2 credits.
- 558. Music for the Exceptional Child.** Methods and materials to be utilized in a music program designed for the exceptional child. 3 credits.
- 563. Electronic Music.** Music of electronic composers and their techniques including practical experience in the application of basic techniques. 2 credits.
- 570. Musical Instrument Repair.** Consideration of instrument care, upkeep, and minor repair. 2 credits.
- 578. Voice Pedagogy.** Basic problems and techniques in the teaching of voice and chorus. Survey of procedures and materials. 2 credits.
- 579. Piano Pedagogy.** Professionalized subject matter intended to broaden the understanding of the basic pedagogical problems of teaching private and class piano; a survey of available methods and materials. 2 credits.
- 582. Double-Reed Construction.** The construction of reeds for oboe, bassoon, and English horn, with attention to varying shapes and facings, intonation problems, tone procurement and adjustment of reeds to fit the individual and instrument. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

- 605. Functional Harmony.** Organization of harmonic structure; geared to needs of music educators in elementary and secondary schools. 3 credits.
- 609. Introduction to Research in Music Education.** Materials, techniques, and procedures for research in music education. 3 credits.
- 610. Curriculum Development.** A philosophical and historical study of the problems of music curricula development with emphasis on current practices. 4 credits.
- 614. Music History Symposium.** Music history structured to meet the needs and interests of the class. 3 credits.
- 615. Music Literature.** Major works of composers ranging from Bach to Schoenberg, with special emphasis given to aesthetics and evaluation. 4 credits.
- 620. Analytical Techniques.** Harmonic, melodic, and structural analysis of music in various periods with emphasis on those aspects specifically needed by students. 4 credits.

- 623. Music in Western Civilization.** Primarily for students who want a general studies elective in music. Examination of music masterpieces, continuation and elaboration of Music 123. Not open to students with majors or minors in music. 3 credits.
- 625. Canon and Fugue.** Contrapuntal practices employed in the canon and fugue with primary attention to the works of Bach. 2 credits.
- 628. Music of the Baroque and Classical Periods.** A comprehensive study of the history and literature of the 18th century. 4 credits.
- 630. Music of the Romantic Period.** The history and literature of the 19th century. 4 credits.
- 631. Choral Arranging.** Principles and devices in choral arranging for choruses of all types and degrees of development. 4 credits.
- 650. Music for the Classroom Teacher.** Advanced methods in teaching music in the first six grades. Not open to students with music major. Prerequisites: 250 and 251. 4 credits.
- 652. Vocal Music Education Resources.** Recent materials for use in the total music program. Prerequisite: Approval of Department. 3 credits.
- 653. Music Education Seminar.** Research and discussion of latest developments. Individual problems analyzed and discussed. 2 credits.
- 654. Stringed Instrument Pedagogy.** Special projects; special techniques of bowing, position work, and artistic skills; survey of solo materials. 2 credits.
- 655. Instrumental Administration.** Administrative principles applied to school bands, with special emphasis on organization, promotion, and public relations. 2 credits.
- 656. Band Rehearsal Techniques.** Practice in aural discrimination of performance errors and application of corrective procedures. Special emphasis given to intonation, balance, blend, quality, interpretation, and ensemble. 2 credits.
- 660. Elementary Vocal Music Administration.** Advanced work in music administration; co-teaching; conferences; workshops; resource units; developmental music programs; professional relations. 3 credits.
- 661. Teaching and Administration of Music in Junior and Senior High Schools.** Place of music in education adolescents; materials and activities. Prerequisite: Music 300, 302. 3 credits.
- 665. Private Lessons: Piano.** Prerequisite: Approval of Department. 1 credit.
- 666. Private Lessons: Organ.** Prerequisite: Approval of Department. 1 credit.
- 669. Private Lessons: Voice.** Prerequisite: Approval of Department. 1 credit.
- 671. Private Lessons: String Instruments.** Prerequisite: Approval of the Department. 1 credit.
- 672. Private Lessons: Brass Instruments.** Prerequisite: Approval of the Department. 1 credit.
- 673. Private Lessons: Woodwind Instruments.** Prerequisite: Approval of the Department. 1 credit.
- 674. Private Lessons: Percussion Instruments.** Prerequisite: Approval of the Department. 1 credit.
- 676. Woodwind Pedagogy.** Basic pedagogical problems and techniques of each woodwind instrument. Methods and materials for teaching woodwinds. 2 credits.
- 677. Brass Pedagogy.** Basic pedagogical problems and techniques of each brass instrument. Methods and materials for teaching brass instruments. 2 credits.
- 680. Psychology of Music.** Function of the musical mind; factors in the development of musical skills and maturity. 3 credits.
- 681. Aesthetics.** An analysis of aesthetic theories from Pythagoreanism to twentieth century theories as applied in music. 3 credits.
- 698. Creative Work.** 1-6 credits.
- 699. Master's Thesis.** 1-6 credits.

THEATRE

Acting Chairman: Dale Swanson

Graduate Faculty: Swanson, Baschky, Cermele

MASTER OF ARTS

An applicant for admission to this program must have completed not less than 24 hours of undergraduate work in theatre, or have had practical experience which, in the judgment of the staff of the Department of Theatre, is equivalent to 24 quarter hours. In some cases, the student may be required to complete additional undergraduate work even though he has completed 24 quarter hours at the undergraduate level. For unconditional admittance, the applicant must have an undergraduate honor point ratio of 2.8 or above. Students whose undergraduate honor point ratio is less than 2.8 may be admitted to the program conditionally.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their field of concentration.

Plan A only, 45 credits.

- I. Courses in Theatre (24–36 credits).
 - A. Prescribed: Creative Work 698 or Master's Thesis.(3–6 credits).
 - B. Electives: (18–30 credits).
- II. Cognate Courses (9–21 credits).

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

542. Theory and Practice of Stage Lighting. Basic requirements of lighting for the stage. 3 credits.

544. Advanced Creative Project. Laboratory course for advanced theatre majors allowing implementation of creative problems in acting, directing, design and other theatre areas. Direction of short play required of B.S. majors. Other options of B.A. majors. Special permission of staff. Prerequisite: 349. 1–4 credits.

547. Scenic Design II. Continuation of Scenic Design I. Laboratory. Prerequisite: 346. 3 credits.

548. Acting II. Analyzing and creating a stage character. Prerequisite: 248. 3 credits.

549. Directing II. Advanced directing techniques. Prerequisite: 349. 3 credits.

555. Costuming II. Continuation of Costuming I. 3 credits.

558. Acting III. Continuation of Acting II. 3 credits.

559. Directing III. Continuation of Directing II. 3 credits.

560. Theatre Promotion and Business Management. Promotion and business procedures in the theatre. 3 credits.

566. Theatre Design. Patterns in the historical development of theatre design and construction. 3 credits.

591. Drama I. The beginning of Ibsen, world drama, its origin and genesis. Primitive drama. Classical Greek and Roman, Oriental, Medieval, Elizabethan, Neo-classic, French, Restoration, Eighteenth Century to 1875. 4 credits.

592. Drama II. Modern drama from Ibsen to World War II. Literature and production techniques of the modern theatre. 4 credits.

593. Drama III. Contemporary drama. Trends in the literature and production techniques of today's theatre. 4 credits.

596. Summer Theatre. Theatre production for advanced students. Experience in acting, directing, costuming, construction, promotion, lighting and other disciplines during the summer season. Registration by application only. 1–8 credits.

597. Dramatic Theory and Criticism. Content and influences of major theoretical works pertaining directly and indirectly to the dramatic arts. Primary sources in translation from Aristotle to the Absurdist. 3 credits.

598. Internship in Theatre. In residence training with a cooperating professional theatre whose intern program has been approved by the Department of Theatre. Maximum of 12 credits. Maximum of 4 credits counted toward required electives in the Department of Theatre. Admission by departmental approval only. 4-12 credits.

COURSES FOR GRADUATE STUDENTS

639. Seminar in Acting. 3 credits.

640. Seminar in Directing. 3 credits.

660. Seminar in Technical Problems of Theatre. 3 credits.

661. Seminar in Theatre History. 3 credits.

698. Creative Work. 3-6 credits.

699. Master's Thesis. 3-6 credits.

SCHOOL OF INDUSTRY

Alfred A. Lease, Dean

INDUSTRIAL EDUCATION

Chairman: William Kemp

Graduate Faculty: Kemp, Bergstrom, Carter, LaCroix, R. Larson, Matthias, Nestel, Ryan

MASTER OF SCIENCE

An applicant for admission to the Master of Science degree in Industrial Education must meet the following requirements:

1. A baccalaureate degree from an accredited college or university.
2. Hold a Minnesota Vocational Teacher Certificate in Industrial Education or have completed an undergraduate teacher education program from an accredited teacher preparation institution.
3. An acceptable score on the Graduate Record Examination and/or acceptable undergraduate scholarship.

In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though he may have an undergraduate major or minor.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research
Ed. 615 Introduction to Research, 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.
B. Elective: Selected course work in industrial education to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

517. Organization and Administration of Industrial Education. Organization and administration of all-day part-time, and evening industrial programs. 3 credits.

518. Conference Leading. Techniques and practices employed in leading and participating in conferences. 3 credits.

524. Photo Offset Lithography. Advanced techniques in photo offset lithography, including the line and continuous tone copy preparation, line and halftone photography, stripping and flat making, platemaking, and press operation. Prerequisite: Ind. 225. 3 credits.

525. Color Separation. Introduction to color separation procedures. Basic color theory, color separation, platemaking, and multi-color printing. Direct and indirect color separation, continuous tone intermediates, filtering, masking, and color stripping. Prerequisite: Ind. 424-524. 3 credits.

531. Evaluation in Industrial Subjects. Processes of evaluation and problems of measuring achievement in industrial-technical areas. Selection, development and validation of evaluative instruments and techniques. 3 credits.

551. Selection and Organization of Subject Matter. Technique of trade and job analysis;

selection of teaching content; organization of content into instruction sheets and course material. 3 credits.

552. Laboratory Planning and Safety. Theory and practice in planning industrial education laboratories; selection and arrangement of equipment; safety factors involved. Approaches to new laboratory planning and reorganization of existing laboratory areas. Recommended after student teaching. 2 credits.

571. Electronics Technology V. Theory and application of special transmitters and receivers; specialized antenna systems. 3 credits.

572. Electronics Technology VI. Industrial electronics; theory and applications of industrial controls and systems. 2 credits.

586. Advanced Traffic Safety Teaching Techniques. An analysis and practical application of advanced teaching methods in classroom and laboratory. Prerequisites: 290, 390, 491, or teaching experience in traffic safety education. 3 credits.

587. Problems and Methods of Driver Education. The identification, analysis and appraisal of selected problems related to the administration and supervision of traffic safety programs. Scheduling, legislation, certification, curriculum development and financing. Prerequisites: Ind. 290, H.E. 305, Ind. 390 and 491, or teaching experience in traffic safety education. 3 credits.

598. Internship. Offered only to students who hold internship with industrial organizations for which advanced approval has been given by the department. 1-8 credits.

COURSES FOR GRADUATE STUDENTS

601. Technology and Man. Effects of invention and technological development on society with implication for man's general education. Not open to Industrial Arts majors. 3 credits.

604. Current Issues of Industry. Current industrial issues, events, advancements and their effects on industrial education. Not open to students taking or who have taken 601. 3 credits.

615. Seminar in Industrial Education. Group exploration of topics bearing on industrial education. (Example: Evaluation of psychology of learning as it relates to industrial education). 2 credits.

632. Technical Problems (Graphic Communications). Technical study for specialists in graphic communications. Recent developments, experimentation and technical reports. 3 credits.

640. Technical Problems (Manufacture). Technical study for specialists in the manufacturing industry. Recent developments, experimentation and technical reports. (3 lab. hours per week by arrangement required). 3 credits.

663. Technical Problems (Synthetics). Technical study for specialists in the area of synthetics. Recent developments, experimentation and technical reports. (3 lab. hours per week by arrangement required). 3 credits.

665. Technical Problems (Construction). Technical study for specialists in the construction industry. Recent developments, experimentation and technical reports. (3 lab. hours per week by arrangement required). 3 credits.

668. Current Literature and Research. Analysis of literature of the industrial field, with special attention to individual readings and reports, implications of such literature for current problems in industrial education. 4 credits.

673. Leaders and Movements in Industrial Education. Contributors to development of industrial education with special attention to economic, social and philosophical factors motivating this development. 4 credits.

683. Technical Problems (Energy and Power). Technical study for specialists in the energy and power field. Recent developments, experimentation and technical reports. (3 lab. hours per week by arrangement required). 3 credits.

699. Master's Thesis. 3-9 credits.

SCHOOL OF LIBERAL ARTS AND SCIENCES

Warren B. Armstrong, Dean

BIOLOGICAL SCIENCES

Chairman: Charles Rehwaldt

Graduate Faculty: Rehwaldt, D. Barker, H. Barker, Burton, Clapp, Coulter, Ezell, Grewe, Gundersen, Hopkins, Hopwood, V. Johnson, K. Knutson, Kramer, S. Lewis, Lindstrom, McCue, D. Mork, Partch, Peck, D. Peterson, C. Pou

MASTER OF ARTS

The applicant for admission must have earned a minimum of 48 credits in biology and 12 credits in chemistry before admission to this program. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work. At least 15 credits must be earned in the major in which enrollment is limited to graduate students.

Plan A, 45 credits; Plan B, 45 credits (Starred Papers).

- I. Courses in Biological Sciences (minimum 30 credits).

- A. Prescribed:

- Plan A: Master's Thesis, 3 to 9 credits.

- Plan B: Three starred papers written in conjunction with approved graduate courses.

- B. Electives: From 21 to 27 credits must be earned in Biology courses.

- II. Related Fields: A maximum of 15 credits may be earned in approved related fields.

A student completing the Plan B program will be required to pass a final oral examination based on the starred papers submitted to the final evaluation committee (see page 19 of the Graduate Bulletin). However, a Final Written Comprehensive Examination is *not* required for Plan B (starred papers), Master of Arts degree.

Department policy statements on evaluation procedures, starred papers, and reading lists, are available in the department office. Students are encouraged to obtain pertinent material no later than the first quarter of enrollment.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed a minimum of 48 undergraduate credits in biology. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research

- Ed. 615 Introduction to Research, 3 credits.

- II. Major: Minimum, 24 credits.

- A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.

- B. Elective: Selected course work in biology to total 24 credits in the major.

- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)

- IV. Professional Education: Minimum 9 credits (consent of Secondary Education adviser).

- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

504. Protozoology. Taxonomy, ecology, physiology, economic importance of the protozoa. Laboratory. Prerequisite: Biology 203. 4 credits.

- 505. Radiation Biology.** Introduction to radiation, laws governing its use, medical uses, and its effects on man. Laboratory. Prerequisite: 202, 203, 332, Chemistry 211. 4 credits.
- 509. Biological Techniques.** Collection, preparation, and display of biological materials. Laboratory. 2 credits.
- 511. Human Heredity.** Human heredity as a component in function, behavior and evolution. Social and political interactions. Not open to biology majors or minors. 4 credits.
- 521. Laboratory Procedures.** Techniques, skills, and practical experiences. May be repeated once only. 1 credit.
- 523. Environmental Science for Teachers.** Classroom and field techniques useful in the analysis and interpretation of the interrelations of biotic and abiotic environmental factors. Prerequisite: Biology 326 or permission of instructor. 3 credits.
- 532. Molecular Genetics.** Biochemical approach to inheritance and development. Laboratory. Prerequisite: Biology 332 and 344. 4 credits.
- 533. Aquatic Plants.** Taxonomy and ecology of aquatic plants, including vascular plants, mosses and selected algae and fungi. Laboratory. Prerequisite: Biology 301 and 248 or 345. 4 credits.
- 534. Freshwater Algae.** Morphology, taxonomy and ecology of algae of lakes, ponds, streams, bogs and soils. Laboratory. Prerequisite: Biology 202. 4 credits.
- 535. Comparative Animal Physiology.** Comparative study of functional mechanisms in the various phyla. Prerequisite: Biology 203, 303, Chem. 211. 3 credits.
- 536. Plant Physiology.** Principles of metabolic processes of higher plants. Laboratory. Prerequisite: Biology 202, 303, Chem. 211. 4 credits.
- 537. Plant Morphology.** Survey of plant kingdom with emphasis on structure and form of primitive plants. Laboratory. Prerequisites: Biology 202. 4 credits.
- 538. Freshwater Invertebrates.** Collection, preservation and classification of local species of economic importance. Laboratory. Prerequisite: Biology 202. 4 credits.
- 539. General Parasitology.** Animal parasites and their relation to diseases of men and other animals. Laboratory. Prerequisite: Biology 203. 4 credits.
- 540. Mycology.** Structure, development, and identification of fungi with emphasis on species of economic importance. Laboratory. Prerequisite: Biology 202. 4 credits.
- 541. Plant Ecology.** Relations between plants and their environment; field studies of plant communities and succession. Laboratory. Prerequisite: Biology 301, one course (or concurrent registration) in Biology 247, 248, or 345. 4 credits.
- 542. Embryology.** Prenatal development of human body; laboratory emphasis on chick and pig. Laboratory. Prerequisite: Biology 203. 4 credits.
- 543. Animal Behavior.** Behavior of animals as interpreted through comparative studies and experimentation. Laboratory. Prerequisite: Biology 203 or consent of instructor. 4 credits.
- 545. Medical Bacteriology.** Morphology, classification, techniques of culture and rapid identification of pathogenic bacteria. Laboratory. Prerequisite: 344. 4 credits.
- 546. Immunology.** Introduction to systems of infection and immunity with antigen-antibody relationships; and their effect on man with respect to protection and injury. Mechanisms of hypersensitivity; natural and acquired immunity. Prerequisite: Major or pre-professional. 3 credits.
- 547. Laboratory Methods in Immunology.** Preparation of antigens and antibodies, immune reactions, protein estimation, application of electrophoresis, fluorescent antibody and column chromatography. Laboratory. Prerequisite: 446 or concurrent enrollment. 2 credits.
- 548. Limnology.** Lakes and streams, their physical environment, plant and animal life and dynamic interrelations. Laboratory. Prerequisite: Biology 301, Chem. 212. 4 credits.
- 551. Animal Ecology.** Distribution, life histories, habitat requirements, and environmen-

tal interrelations of vertebrates and invertebrates. Laboratory. Prerequisite: Biology 301 and one of the following: 339, 340, 341, 347. 4 credits.

552. Water and Sewage Microbiology. Indicators of pollution, determination of numbers and kinds of micro-organisms, standards of pollution, purification of water, microbiology of sewage disposal. Laboratory. Prerequisites: Biology 344, Chem. 251. 4 credits.

553. Invertebrate Zoology. Classification, phylogeny, anatomy, physiology, and natural history of invertebrates. Laboratory. Prerequisite: Biology 203. 4 credits.

554. Wildlife Management. General principles of wildlife management with detailed studies of selected species. Laboratory. Prerequisite: Biology 301. 4 credits.

555. Physiology of Bacteria. Comparative study of the metabolism of growth and reproduction of microbes. Laboratory. Prerequisites: Biology 303, 344, Chem. 251. 4 credits.

556. Methods for Teaching Sciences. Modern approaches to teaching science in junior or senior high school. Laboratory. 2 credits.

557. Methods and Materials for Teaching Biology. Modern approaches to teaching high school biology in classroom and laboratory; including materials of Biological Sciences Curriculum Study. Laboratory. 2 credits.

558. Plant Anatomy. The structure, organization and development of the plant body of higher plants. Laboratory. Prerequisite: Biology 202. 4 credits.

559. Organic Evolution. History, evidence, and processes of evolution. Prerequisite: Biology 332. 3 credits.

561. Economic Entomology. Life histories and control measures for economically important insects. Laboratory. Prerequisite: Biology 341. 2 credits.

562. Medical Entomology. Study of arthropods of medical and veterinary importance with emphasis on vector biology and disease ecology. Laboratory. Prerequisite: Biology 439-539 or consent of instructor. 4 credits.

563. Endocrinology. A study of the morphology and physiology of the endocrine glands in physiological communication and regulation. Laboratory. Prerequisite: 464-564, 465-565. 4 credits.

564. Human Anatomy and Physiology I. Structure and metabolic activity of organ systems including muscular, skeletal, nervous and integumentary. Laboratory. Prerequisite: Biology 303. 4 credits.

565. Human Anatomy and Physiology II. Structure and metabolic activity of organ systems including circulatory, respiratory, digestive, urinary, endocrine and reproductive. Laboratory. Prerequisite: Biology 464. 4 credits.

568. Limnological Methods. Theory and practice in limnological sampling and analysis, emphasis on plankton, physical and chemical parameters. Laboratory. Prerequisite: Biology 448. 4 credits.

569. Soil Microbiology. The role of micro-organisms in the soil, their identification, culture and environmental significance. Laboratory. Prerequisites: Biology 303, 344. 4 credits.

570. Fisheries Biology. Natural history, ecology, recreational and commercial aspects, and special methods. Laboratory. Prerequisites: Biology 301, 340. 4 credits.

572. Plant Growth and Development. Selected topics in plant physiology with emphasis on the hormonal control of plant growth and development. Laboratory. Prerequisite: Biology 436-536. 4 credits.

577. Biology Institute. Selected topics on biology for experienced teachers of science. Laboratory. 3-6 credits.

589. Paleobiology. Field and laboratory study of living and fossil species and geological aspects of the environment. Laboratory. Prerequisites: Biology 202, 203, Earth Science 284. 4 credits.

598. The Nature of Biological Science. Assumptions, methods and limitations of science. Historical roots of biology and the development of major concepts. Operational struc-

ture and communication in biology. Interactions with other components of culture and society. Prerequisite: Senior standing. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Biology. 1-4 credits.

602. Modern Biological Concepts. General education course in which modern concepts in physiology, genetics, and ecology are developed through selected laboratory experiences, reading, and discussion. Not open to students with majors or minors in biology. 3 credits.

603. Research in Biology. 1-4 credits, (May be repeated once).

630. Seminar in Biology. 1 credit, (May be repeated).

639. Advanced Parasitology. Selected topics in parasitology with emphasis on the inter-relationships between the parasite and its host. Laboratory. Prerequisite: 439. 4 credits.

641. Advanced Entomology. Identification of insect families with ecological or taxonomic specialization in one group; discussion of selected topics in insect taxonomy, physiology and behavior. Laboratory. Prerequisite: 341 and a summer insect collection. 4 credits.

644. Virology. Structure and properties of viruses, host-virus interactions, major groups, relation to disease, diagnostic techniques. Prerequisites: 344, Chemistry 324 or equivalent. 3 credits.

645. Molecular Biology. Dynamic aspects of cell structure and function at the molecular level. Laboratory. Prerequisite: Chemistry 251. 4 credits.

647. Advanced Ornithology. Functional morphology and breeding biology of birds. Laboratory. Prerequisite: 347. 4 credits.

648. Advanced Immunology. Theoretical basis, techniques, and applications of immunology. Laboratory. Prerequisite: 446-546, 447-547. 4 credits.

650. History of Biology. Origin and development of major ideas of biological thought. 2-4 credits.

652. Pollution Biology. Classification of pollutants and their effects on water and air quality, biota, and socio-economics. Remedial methods. Laboratory. Prerequisite. 448. 3 credits.

663. Advanced Genetics. Selected topics with emphasis on gene structure, mutations, complementation and other aspects of modern genetics. Prerequisite: 332. 3 credits.

666. Biogeography. Past and present distribution of biotic communities in relation to environmental and historic factors. Prerequisite: 441. 3 credits.

669. Biology of Lakes. Lectures, readings, and discussions in the biology of lakes. Prerequisites: 448-548, 468-568. 3 credits.

670. Biology of Streams. Lectures, readings, and discussions on the limnology of streams. Prerequisites: 438-538, 448-548, 468-568 recommended. 3 credits.

696. Research Reporting. Research analysis and reporting. Students will be graded on an S/U basis. 3 credits.

699. Master's Thesis. 3-9 credits.

CHEMISTRY

Chairman: John Carpenter

Graduate Faculty: Carpenter, Arndts, J. Erickson, Laakso, Magnus, McMullen, Nickels, Sorenson

MASTER OF SCIENCE - Physical Science

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed an undergraduate major in either chemistry, physics or earth science with some work in the

other fields and in mathematics. In some cases the applicant may be required to complete additional undergraduate work even though he may have completed a major in one of the three fields.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research
Ed. 615 Introduction to Research. 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.
B. Elective: Selected course work in chemistry, physics or earth science to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education Adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

509. Advanced Inorganic Chemistry I. Development of the concepts of inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; coordination compounds. Laboratory. Prerequisite: Chem. 212 or 213. 2 credits.

511. Advanced Inorganic Chemistry II. Application of the concepts of inorganic chemistry as applied to chemical elements and compounds. Further work in coordination chemistry including the ligand field theory. Prerequisite: 509. 4 credits.

512. Radiochemistry. Physical aspects of radiation, its measurement and its chemical and biological effects. Nuclear decay and bombardment reactions. Chemical operations involving radioisotopes. Some knowledge of basic calculus is desirable. Prerequisite: 212 or 213. 2 credits.

513. Radiochemistry Laboratory. Detection, characterization, and measurement of radiation; chemical operations and the application of radioisotopes to chemical and biochemical problems. Prerequisite or concurrent registration: 412-512. 2 credits.

520. Seminar. Lectures, readings, discussions on selected topics. May be repeated. 1 credit per quarter to a maximum of 4 credits.

522. Instrumental Analysis. Introduction to the theory and practice of the major instrumental methods of chemical analysis; spectroscopy, electrometry and chromatography. Prerequisite: 325. 4 credits.

523. Qualitative Organic Analysis. Identification of several simple and mixed organic compounds by physical and organic qualitative methods. Prerequisite: 252 or 393. 4 credits.

525, 526, 527. Physical Chemistry. Application of fundamental laws and theoretical principles to atomic and molecular structure, gases, liquids, solids, solutions, phase equilibrium, chemical reactions (equilibrium and kinetics), and electrochemical processes; to understand the macroscopic in terms of molecular behavior. Prerequisites: Chem. 325, Physics 232 and 233, and Math. 243. 3 credits per quarter.

528, 529. Physical Chemistry Laboratory. These are laboratory courses to complement the physical chemistry lecture sequence. A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles. Prerequisites: Chem. 426-526 or concurrent registration. 2 credits per quarter.

556. Methods and Materials for Teaching Sciences. Modern approaches to teaching science in junior or senior high school. Laboratory. 2 credits.

558. Methods and Materials for Teaching Chemistry. Modern approaches to teaching of high school chemistry in classroom and laboratory, including materials of Chemical Bond Approach Project and Chemical Education Materials Study. Laboratory. Prerequisite: Chemistry 556 or concurrent registration. 2 credits.

560-569. Selected Topics in Chemistry. Non-sequence courses designed for intensive study of special topics such as high temperature chemistry, solid state chemistry, rare earth chemistry, nonaqueous solutions, coordination compounds, biopolymer syntheses, kinetics, quantum chemistry, and neutron-activation analysis. Courses will be announced in quarterly class schedules. Departmental approval required for enrollment. 1-4 credits.

577. Chemistry Institute. Selected topics in chemistry for experienced teachers of science. Laboratory. 3-6 credits.

581. Chemical Thermodynamics. Concepts of both classical and modern thermodynamics applied to problems encountered in Chemistry. Prerequisite: Chem. 426. 4 credits.

COURSES FOR GRADUATE STUDENTS

601. Major Developments in Physical Sciences. General course employing selected science experiences as a basis for explanations of major developments in the area of physical science; their significance. Not open to students with majors or minors in physical science. 3 credits.

610. History of Chemistry. The origin and historical development of chemical concepts. Prerequisites: Chemistry background or consent of instructor. 3 credits.

699. Master's Thesis. 3-9 credits.

ECONOMICS

Chairman: Allen Larsen

Graduate Faculty: Larsen, Bruhn, Gleisner, Lofgreen, Luksetich, Nappi

A graduate program in economics is available, Master of Science: Social Science (economics). See degree requirements under Social Science, page 00.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

551. Resource and Environmental Economics. Analysis of the problems of natural resource allocations, including air and water quality control. Economic efficiency, externalities, constraints and long run implications. Prereq: 273 and 274, or consent of instructor. 4 credits.

560. Public Finance. The role of government in the economy with emphasis upon analysis of public revenues and expenditures, tax structure, intergovernmental fiscal relations, fiscal policy and public debt measurement. 4 credits.

561. Public Economics: State and Local. The economics of state and local government. Emphasis on the state and local public projects, tax and revenue structures, and intergovernmental relations. Some emphasis on Minnesota and surrounding area. Prereq: 273 and 274, or consent of instructor. 4 credits.

565. Urban and Regional Economics. Economic theory and analysis of economic regions, including the city as a regional center. Emphasis on regional development, location theory, central place theory, regional growth, financing, and problems considered. Some emphasis on Central Minnesota. Prereq: 273 and 274, or consent of instructor. 4 credits.

570. Business Cycles and Forecasting. Factors causing fluctuations in business activity and national income; proposed methods of stabilization; business forecasting techniques. Prerequisite: 273 and 274. 4 credits.

571. Money and Banking. A study of the monetary and banking system of the United

States; the nature of bank credit, operation of the individual bank and its relation to banking system, Federal Reserve System, central bank policy, and relationship between bank credit, money and price levels. Prerequisite: 273 and 274. 4 credits.

572. Social Control of Business. A course in the economic theory and practice of government regulation and control of business activity in the United States. Prerequisites: 273, 274. 4 credits.

573. Labor Economics. Labor as a factor of production; growth of collective bargaining and labor legislation, with their attendant effects upon society. Prerequisite: 273 and 274. 4 credits.

574. International Economics. International economic relationships and their effects upon domestic and foreign economics; commercial and financial policies; tariffs, exchange controls, international monetary standards, and institutions established to facilitate international settlements. Prerequisite: 273 and 274. 4 credits.

575. National Income and Employment. Study of flow of expenditures and income and their impact upon national income and price levels, with appropriate consideration of possible stabilization controls. Prerequisite: 273 and 274. 4 credits.

576. Price and Distribution Theory. Nature and scope of economic processes in free enterprise system; determination of prices, output and factor services in different market structures. Prerequisite: 273 and 274. 4 credits.

578. History of Economic Thought. Development of economic thought and analysis from Adam Smith to present. Prerequisite: 273 and 274. 4 credits.

579. Manpower Policy and Analysis. An examination of the factors which influence the quantity and quality of labor and of the economic aspects of government policy toward labor as an individual entity. Prerequisites: 273, 274. 4 credits.

580. Seminar in Area Economic Studies. An examination of the economy and the current economic problems of selected regions, areas, or countries of the world. Prerequisite: Departmental approval. 1-4 credits.

581. Seminar. Selected topics in economic theory. Prerequisite: Departmental approval. 1-4 credits.

583. Contemporary Economic Problems. Consideration and possible solutions of problems arising from growth and development of modern institutions under the free enterprise system. Prerequisite: Department approval. 4 credits.

587. Economic Growth and Stability. Behavior of the aggregate output and income over time. Models of long-run growth and short-run cycles are utilized to examine American fiscal and monetary systems, policies and programs to maintain economic stability, high level of employment and income. Prerequisite: 475-575 or 470-570. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Economics. Guided study of individual investigation of special economic problems and/or theoretical topics. Credits and meetings by arrangement. 1-4 credits.

602. Readings in Economic Education. Guided study of individual investigation of the literature in the field and/or its applications. Credits and meetings by arrangement. 1-4 credits.

610. Economic Education. The identification and examination of economic concepts found in the public school curricula. A study of the economic theories which are necessary to understand these concepts and development of analytical models for examination of economic public policy issues. 4 credits.

630. Seminar:_____. Research and seminar presentation on selected economic topics. May be repeated. Prerequisite: Consent of department. 1-4 credits.

631. Seminar in Economic Education. Research and seminar presentation of topics in economic education. May be repeated. Prerequisite: Consent of department. 3 credits.

644. Internship. Advanced approval of the department required. 8 credits.

645. Economic Problems of Underdeveloped Countries. A study of the social and economic development, and of the leading issues in economic growth theory. Selected cases of underdeveloped countries will be examined in detail. 4 credits.

664. Methods of Regional Economic Analysis. The methodology of regional analysis, including linear programming, simulation, economic base studies, input-output analysis, benefit-cost analysis, projection, estimation, and forecasting. Prereq: 465-565. 4 credits.

665. Seminar in Regional Economics. Application of regional economic methods and analysis to regional planning problems. Emphasis on regional development planning, economic growth, and funding regional economic growth and development. Prereq: 664. 4 credits.

677. Business Economics. Economic analysis as an aid in business management and control. 4 credits.

679. Comparative Economics. An analysis of the present-day functioning of different economic systems of the economically advanced nations. Comparison of the principles of operation of the systems using theoretical systems as a framework for the analysis and comparison of the social and economic objectives where relevant. 4 credits.

ENGLISH

Chairman: James Gottshall

Graduate Faculty: Gottshall, Bovee, Cairns, Coard, Falk, Lawson, Leja, Lundquist, Meissner, Melton (Director, Graduate Education in English), Otto, Summers, M. Thompson, Tosh, VanPelt

MASTER OF ARTS

The M.A. degree in English is the standard degree for those planning a program leading to the Ph.D. degree, for junior college teaching, and for general cultural enrichment.

The applicant, for unconditional admittance to the M.A. degree, must have completed at the undergraduate level not less than 36 quarter hours of credit in English, exclusive of general education courses, and must meet the admission standards as required by the Office of Graduate Studies.

Before the degree is granted, the student must demonstrate competency in a foreign language acceptable to the English Department. This requirement may be met by successful completion of an examination, by successful completion of a graduate reading course in a foreign language, or by the completion of 24 quarter credits of work in a foreign language.

A minimum of 15 credits must be earned in the major in which enrollment is limited to graduate students.

Plan A only, 48 credits.

- I. Credits in English (minimum: 36 credits).
 - A. Prescribed: English 616, Literary Research (or equivalent course). 4 credits.
English 699, Master's Thesis. 4-6 credits.
 - B. Electives: A minimum of 28 credits must be elected in English.
- II. Cognate courses: A maximum of 12 credits may be earned in approved cognate courses.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at the undergraduate level a minimum of 36 quarter credits in English exclusive of general education courses and must meet the admission standards as required by the Office of Graduate Studies.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 46 credits; Plan B, 49 credits.

- I. Research
English 616 Literary Research (or equivalent course), 4 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: English 699 Master's Thesis (Plan A only), 4-6 credits.
B. Elective: Selected course work in English to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

**COURSES FOR ADVANCED UNDERGRADUATE
AND GRADUATE STUDENTS**

521. Literary Theory and Criticism. The concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form, and technique, and the responses that literature elicits. 3 credits.

534. English Grammars. Analysis of Modern English structure from different types of written grammars, traditional to contemporary, with special emphasis on insights from recent research and publication. 4 credits.

535. History of the English Language. The development of English sounds, grammatical structures, and vocabulary from Old English to Modern English; the reading and analysis of selected texts. Prerequisite: 432. 3 credits.

536. American English. Contemporary spoken American English social and regional dialects and their relationship to the written language. 4 credits.

539. Topics in Linguistics. One or more topics of current importance in linguistics. 4 credits.

545. The Nineteenth-Century English Novel. Austen, Scott, Mary Shelley, Dickens, Thackeray, Meredith, Butler, Eliot, Hardy, and others. 4 credits.

546. The American Novel. The development of the American novel. 4 credits.

547. Seminar in Literary Themes. Selected recurrent themes in literature. 4 credits.

548. Seminar in Literary Forms. The forms of literature. 4 credits.

555. The Contemporary Mass Media as Literature. The creative productions of both print and electronic mass media today with a focus on the nature, potential and limitations of the different artistic and technical forms. 4 credits.

585. The Eighteenth-Century English Novel. Defoe, Richardson, Fielding, Smollett, Sterne, and related authors. 4 credits.

590. European Writers of the Twentieth Century. 4 credits.

591. Drama I. The Beginnings to Ibsen. World drama, its origin and genesis. Primitive drama. Classical Greek and Roman, Oriental, Medieval, Elizabethan, Neo-classic French, Restoration, Eighteenth Century to 1875. 4 credits.

592. Drama II. Modern drama from Ibsen to World War II. Literature and production techniques of the modern theatre. 4 credits.

593. Drama III. Contemporary drama. Trends in the literature and production techniques of today's theatre. 4 credits.

594. American Writers of the Twentieth Century. 4 credits.

597. British Writers of the Twentieth Century. 4 credits.

COURSES FOR GRADUATE STUDENTS

616. Literary Research. Bibliography, methods, and tools in the art of literary research. 4 credits.

622. History of Literary Theory and Criticism. Major texts from ancient times to the

- present. Designed to provide the student with a background of critical history. 4 credits.
- 637. Old English.** The language and literature of the Anglo-Saxon period. 4 credits.
- 640. Seminar in Chaucer.** Selected aspects of Chaucer's prose and poetry. 4 credits.
- 641. Seminar in Milton.** Selected aspects of Milton's prose, poetry, and drama. 4 credits.
- 643. Shakespeare Studies.** The text and sources; theories; and history of representative comedies, tragedies, and histories. 4 credits.
- 652. Language Arts Problems.** The latest trends in language arts teaching and course organization; application to specific problems of class members, with emphasis on individual research. Prerequisite: 452 or equivalent. 4 credits.
- 653. Seminar in Literature for Adolescents.** An analysis of one or more approaches to the study of literature in the secondary school and of reading materials appropriate to these approaches. 4 credits.
- 654. Teaching Composition in the Secondary School.** Study of current theory and practice in composition teaching in the junior and senior high schools. Development of practical programs to fit teaching needs of individual students. 4 credits.
- 656. The Teaching of College English.** The planning and preparation of materials for college teaching. Involves observation in the college classroom together with student teaching. Research project on the teaching of college English required. 3 credits.
- 657. Internship in the Teaching of College English (Literature).** Individual instruction in the theory and techniques of effective college classroom teaching of literature, and practical experience in solving the problems of actual classroom instruction under the direct supervision of an experienced teacher. Research project on the teaching of college English required. Admission by consent of the Chairman. 2 credits.
- 663. Seminar in Early American Literature.** 4 credits.
- 664. Seminar in the American Literature of the Early Nineteenth Century.** 4 credits.
- 665. Seminar in the American Literature of the Later Nineteenth Century.** 4 credits.
- 666. Seminar in American Literature of the Twentieth Century through World War II.** 4 credits.
- 667. Seminar in American Literature of the Twentieth Century since World War II.** A study of significant American authors from World War II to the present with a selection from such writers as Bellow, Baldwin, Lowell, Styron, and Roethke. 4 credits.
- 670. The Study of Middle English Literature.** Selected aspects of English literature from the twelfth to the sixteenth centuries. 4 credits.
- 671. Renaissance Drama.** Representative Tudor and Jacobean dramatists: Kyd, Marlowe, Dekker, Jonson, Webster, Heywood, and related authors. 4 credits.
- 675. English Writers of the Seventeenth Century.** The writings, background, and criticism of one or more of the principal writers of the seventeenth century, such as Bacon, Bunyan, Burton, Donne, Herbert, Jonson, Dryden, Milton, and others. 4 credits.
- 679. Seminar in Restoration Literature.** Selected Restoration authors, writings, and movements from 1660-1710. 4 credits.
- 684. English Writers of the Eighteenth Century.** The writings, background, and criticism of one or more of the principal writers of the eighteenth century. 4 credits.
- 687. Seminar in Nineteenth-Century British Literature.** A selected aspect of nineteenth-century British literature. The content will vary. 4 credits.
- 688. Seminar in World Literature.** Selected readings from the works of one or more major world figures. 4 credits.
- 689. Seminar in Twentieth-Century British Literature.** Selected aspects of twentieth-century British literature. The content will vary. 4 credits.
- 696. Literary Heritage.** Masterpieces from different cultural origins and different ages. A graduate general education course not open to English majors. No prerequisites. S or U grading possible by arrangement with instructor at beginning of course. 3 credits.

697. Contemporary Thought in Literature. A study of the philosophical and cultural content of selected contemporary writings. 4 credits.

698. Creative Work. 4-6 credits.

699. Master's Thesis. 4-6 credits.

FOREIGN LANGUAGES AND LITERATURE

Acting Chairman: Barbara J. Bloomer

Graduate Faculty: Fuyet

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

French 511. Advanced Studies in French Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in French. Prerequisite: nine credits of literature or consent of instructor. 1-4 credits each registration; maximum of 12 credits.

German 511. Advanced Studies in German Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in German. Prerequisite: nine credits of literature or consent of instructor. 1-4 credits each registration; maximum of 12 credits.

Spanish 511. Advanced Studies in Spanish and Spanish-American Literature. Study of a particular Spanish or Spanish-American author or of specific topics in Spanish and/or Spanish-American literature. To be taught in Spanish. 1-4 credits each registration; maximum of 12 credits.

French 514. Advanced Studies in French Literature in Translation. Seminar for intensive study of a particular movement, author, or work as announced in advance. Prerequisite: nine credits of literature or consent of instructor. 1-4 credits each registration; maximum of 12 credits.

German 514. Advanced Studies in German Literature in Translation. Seminar for intensive study of a particular movement, author, or work as announced in advance. Prerequisite: nine credits of literature or consent of instructor. 1-4 credits each registration; maximum of 12 credits.

Spanish 514. Studies in Spanish Literature in Translation. Study of a particular Spanish or Spanish-American author or of specific topics in Spanish and/or Spanish-American literature. 1-4 credits each registration; maximum of 12 credits.

French 537. Literature of the "Tiers Monde". Studies of leading writers in former French Colonies. 3 credits.

French 560. Summer Study Abroad. Prerequisite: French 311, 312, plus 9 credits in literature (300 and 400 level) and approval of Program Director. 3-6 credits.

German 560. Summer Study Abroad. Prerequisite: German 311, 312 plus 9 credits in literature (300 and 400 level) and approval of Program Director. 3-6 credits.

COURSES FOR GRADUATE STUDENTS ONLY

French 601. French for Graduate Students.

German 601. German for Graduate Students.

Spanish 601. Spanish for Graduate Students.

Russian 601. Russian for Graduate Students.

Intensive reading and translation of a variety of texts designed solely to impart a basic reading knowledge of a foreign language (French, German, Spanish, Russian). At the end of one quarter, the student is given the respective Graduate Reading Examination. Successfully passing this examination fulfills the Graduate School requirement of a reading knowledge of a foreign language. No prerequisite is necessary and the courses will be

offered according to need. **The courses cannot be used to reduce credit requirements for a graduate degree.** 3 credits.

French 654. Advanced Methodology in the Teaching of French.

German 654. Advanced Methodology in the Teaching of German.

Russian 654. Advanced Methodology in the Teaching of Russian.

Spanish 654. Advanced Methodology in the Teaching of Spanish.

A seminar dealing with problems of teaching foreign languages at the secondary level and with an examination of recent trends in methodology. Discussion of the course content in English and in the foreign languages. 1-4 credits.

GEOGRAPHY AND EARTH SCIENCE

(For Earth Science, see page 97).

Chairman: Philip Tideman

Graduate Faculty: Tideman, Coppock

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in geography in order to choose it as his major at the graduate level. In some cases, the applicant may be required to complete additional undergraduate work even though he may have completed a minor or major.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A only; Minimum, 45 credits.

- I. Research
Ed. 615 Introduction to Research, 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.
B. Elective: Selected course work in geography to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits. (Credits to be selected with the major adviser from related fields; General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

505. Cartography. Map making and construction; work with map making tools. Topical. 4 credits.

506. Advanced Cartography. Advanced map construction. Application of more complex cartographic techniques and instruments to map making. An emphasis placed upon cartographic representation of statistical data. Prerequisite: 405-505 and/or permission of the instructor. Topical. 4 credits.

554. Regional Planning. Examination of the attitudes, physical basis, and solutions to regional problems that are beyond being simply "rural" or "urban" in nature. Topical. Prerequisite: Consent of Instructor. 4 credits.

559. Outdoor Recreation Land Use. Case studies and field investigations of outdoor recreation land use and related activities. Topical. Prerequisite: 279 or consent of instructor. 4 credits.

572. Geomorphology. The configuration of the earth's surface and physical processes which have brought the surface to its present condition. Topical. 4 credits.

- 574. Meteorology.** Atmospheric phenomena; familiarity with sensing and recording instruments; the analysis of weather maps and weather forecasting. Topical. 4 credits.
- 576. Geography of Sub-Saharan Africa.** Physical geography, resources and people of various regions of Africa related to economic stage and possibilities for future development. Regional. 4 credits.
- 579. Geography of South Asia.** Human and physical geography of India, Pakistan, Afghanistan, Ceylon and the Himalayan Kingdoms. Regional. 4 credits.
- 580. Agricultural Geography.** World areal differences in crop, livestock, and technological patterns. Special emphasis on farming in the United States. Topical. 4 credits.
- 584. Geography of the Pacific Basin.** Human and physical geography of the Pacific Basin. Special emphasis given to the islands of Melanesia, Micronesia, and Polynesia. Regional. 2 credits.
- 586. Political Geography.** Geographical strengths and weaknesses of the Great Powers which influence changes in the world today. Topical. 4 credits.
- 589. Development of Geographic Thought.** Main currents from ancient Greece to present; basic ideas behind division of geography into regional and systematic categories. Topical. 4 credits.
- 590. Urban Geography.** The development of Spatial patterns and relationships within and among urban centers and non-urban areas. Topical. 4 credits.
- 592. Water Resources.** Major problems in the development and management of water resources: problems of supply, distribution, quality, pollution, floods and variability; case-studies in selected regions, urban and rural; brief background in hydrological processes. Topical. 4 credits.
- 598. Geography of Middle America.** Geographic analysis of Mexico, Central American countries, and West Indian Islands. Regional. 4 credits.

COURSES FOR GRADUATE STUDENTS ONLY

- 601. Research or Readings in Topical Geography.** A seminar or conference course for students wishing to investigate some phase of this subject. Credits and meetings by arrangement. 1-4 credits.
- 602. Research or Readings in Regional Geography.** A seminar or conference course for students wishing to investigate the geography of a particular region of the world. Credits and meetings by arrangement. 1-4 credits.
- 630. Seminar: _____.** Research and seminar presentation on a selected geographic topic. Student may elect to take for either 2 or 3 credits. May be repeated. Prerequisite: Consent of Instructor. Regional or topical. 2-3 credits.
- 644. Internship: Practical Geography.** Requires consent of the department and is limited to graduate students only. 1-8 credits.
- 650. Land Use Analysis: Examination of the nature, use, and conservation of the land.** Stress also placed on positive land use planning techniques. Permission of instructor. Topical. 4 credits.
- 654. Urban, Regional and Resource Planning.** Urban and regional planning field; concepts, philosophies and theories of planning; critical review of case-studies selected to illustrate different frameworks of urban, regional and resource planning. Topical. 4 credits.
- 675. Climatology: Climates of the Western Hemisphere.** Climatic elements and climatic types of the Western Hemisphere. Regional delineation of climates, natural vegetation and human adaptation. Topical. 4 credits.
- 677. Climatology: Climates of the Eastern Hemisphere.** Climatic elements and climatic types of the Eastern Hemisphere. Regional delineation of climates, natural vegetation and human adaptation. Topical. 4 credits.
- 699. Master's Thesis.** 3-9 credits.

HISTORY

Chairman: John Massmann

Graduate Faculty: Massmann, Acrea, Cates, Gambill, Gower, Hsiao, Morse, Overly, D. Peterson, Pluth, Sammarrai, Vaughter

MASTER OF ARTS

An applicant for admission to this program must have earned a minimum of 24 credits in history beyond General Education requirements and his undergraduate honor point ratio should be 2.8 or above. Others may be admitted conditionally. In some cases, the applicant may be required to complete additional undergraduate work even though he may have completed a major or a minor.

Reading knowledge of a foreign language is not required but it may be needed. Many graduate schools offering doctorate programs in history prefer applicants who have completed a Master's with a thesis.

Each student, after the completion of one quarter of full-time graduate study (defined as one regular quarter of at least 12 hours, or as 12 hours accumulated through night and summer courses, or as two summer sessions totaling 12 hours or more), shall face a general evaluation of his work only in the second quarter or during his next registration period. Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Department policy statements on evaluation procedures, starred papers, and reading lists are available in the department office. Students are encouraged to obtain pertinent material no later than the first quarter of enrollment.

Plan A: Minimum, 45 credits.

- I. Credits in History (36-39 credits).
 - A. Prescribed:
 1. 699, Master's Thesis, 9 credits.
 2. 578, Historical Criticism and Writing, 3 credits.*
 3. 572, 573, or 574, Non-Western, European, and/or American Historiography. 3-9 credits.*
 - B. Electives: 19-24 credits in History.
- II. Cognate Courses: 6-9 credits in courses approved by adviser.

A student completing the Plan A program will be required to pass a Final Oral Examination based on the Thesis submitted to the Final Evaluation Committee (See page 19 of this bulletin).

Plan B: Minimum, 48 credits.

- I. Credits in History (30-36 credits).
 - A. Prescribed:
 1. 578, Historical Criticism and Writing, 3 credits.*
 2. 572, 573, or 574, Non-Western, European, and/or American Historiography, 3-9 credits.*
 3. Three starred papers written in conjunction with approved courses.
 - B. Elective: 22-30 credits in History.
- II. Cognate Courses: 12-18 credits in courses approved by adviser.

A student completing the Plan B program will be required to pass a final oral examination based on the starred papers submitted to the final evaluation committee (see page 19 of this bulletin).

At the option of the department, candidates, may also be required to complete a final written examination.

*These courses may be waived if the student has fulfilled these requirements as part of his undergraduate program.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in History in order to select it as his graduate major. In some cases, the applicant may be required to complete additional undergraduate work even though he may have completed a major or minor.

A minimum of 15 credits must be earned in the major in which enrollment is limited to graduate students.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research
Hist. 578 Historical Criticism and Writing. 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.
B. Electives: Selected course work in history to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional course in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

520. European Intellectual, 1500-1800. Great ideas of the Renaissance, Reformation, and Enlightenment, and early scientific thought. 4 credits.

521. European Intellectual Since 1800. Origins of modern European ideologies: romanticism, nationalism, liberalism, socialism, Darwinism, and totalitarianism. 4 credits.

522. European Social and Economic Since 1800. Nineteenth century industrialization; social problems; the welfare state; Russia as an industrial power. 4 credits.

523. European Diplomatic Since 1800. Nineteenth century imperialism; origins of World War I; the Versailles Treaty; crises of the thirties; World War II and postwar problems. 4 credits.

531. Russia, 850-1725. Civilization of the city state; rise of Moscow; origins of modern Russian institutions. 4 credits.

532. Imperial Russia, 1725-1917. Territorial expansion and relations with Western Europe; revolutions from above and below; artistic and intellectual currents. 4 credits.

533. Soviet Union, 1917 to Present. Revolution in theory and practice; political, economic, and social institutions; relations with the West and Asia. 4 credits.

545. United States Military History. Military problems and accomplishments from 1775 to the present. 4 credits.

548. U.S. Social and Intellectual to 1865. Social and intellectual trends which shaped American society and thought. 4 credits.

549. U.S. Social and Intellectual Since 1865. Social and intellectual trends which shaped American society and thought. 4 credits.

555. U.S. Foreign Relations, 1775-1898. American foreign policy; neutral rights; Monroe Doctrine; influence of sectionalism on foreign relations; Civil War and its effects; overseas expansion. 4 credits.

556. U.S. Foreign Relations Since 1898. The U.S. as a world power; diplomatic policies in two world wars and their aftermath. 4 credits.

558. The American West. Topical and chronological consideration of western land policy, territorial government; Indian policy, economic development. 4 credits.

563. U.S.-Latin American Relations. General trends with emphasis on specific relations with selected Latin American countries or regions. 4 credits.

572. European Historiography Since 1750. Readings in and interpretations of important European historians. 3 credits.

573. American Historiography. Readings and discussion of historians and historical interpretation from Colonial America to the present. 3 credits.

574. African or Asian Historiography. Problems, research, methods, writing and interpretation in selected African and Asian topics. 3 credits.

578. Historical Criticism and Writing. Problems in and methods of historical accuracy and consistency; references, chronology, availability of knowledge, historical "myths," and preparation of research papers and theses. 3 credits.

580. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American History. Subject area selected by department. Limited to senior or graduate students. 3 credits.

583. Seminar in European History. Bibliographical study, research, and discussion of a selected topic in European history. Subject area selected by department. Limited to senior or graduate students. 3 credits.

586. Seminar in Africa or Asia. 3 credits per quarter. Maximum of 12 credits.

COURSES FOR GRADUATE STUDENTS ONLY

635. Readings in European History. Guided study through individual investigation of special periods and topics. 3 credits.

640. Seminar in Colonial America. Reading and research in one area or topic within period 1607-1789. Subject determined by department. 3 credits.

641. Seminar in U.S. History, 1789-1848. Reading and research in one area or topic, 1789-1848. Subject area selected by department. 3 credits.

642. Seminar in Civil War and Reconstruction, 1848-1877. Reading and research in one area or topic, 1848-1877. Subject area selected by department. 3 credits.

643. Seminar in U.S. History, 1877-1920. Reading and research in one area or topic, 1877-1920. Subject area selected by department. 3 credits.

644. Seminar in U.S. History, 1920 to Present. Reading and research in one area or topic, 1920 to present. Subject area selected by department. 3 credits.

651, 652. Readings in American History. Guided study of American History through individual investigation of special periods and topics. 3 credits per quarter. Maximum of 6 credits.

662. Seminar in Ancient or Medieval History. Bibliographical study, intensive reading, discussion and research in selected areas or topics of European History to 1450. 3 credits per quarter. Maximum of 6 credits.

664. Seminar in Europe, 1450-1750. Bibliographical study, reading in documents and secondary works, analysis and discussion, and research in selected topics or areas. Subject area selected by department. 3 credits per quarter. Maximum of 6 credits.

667. Seminar in Europe Since 1750. Bibliographical study, research and discussion of selected topics in modern European history. Subject area selected by department. 3 credits per quarter. Maximum of 6 credits.

681. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American History. Subject area selected by department. 3 credits per quarter. Maximum of 6 credits.

687. Seminar in Africa or Asia. Reading and research on selected topics other than European or American history. Subject area selected by department. 3 credits per quarter. Maximum of 12 credits.

699. Master's Thesis. 3-9 credits.

INTERDISCIPLINARY STUDIES

Chairman: Harold Lieberman

Graduate Faculty: Lieberman, Downes, Frost, Hellwig, Kelley, N. Thompson

AMERICAN STUDIES

Neil Thompson, Director

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

590. Contemporary American Culture. The exploration of one of the variety of cultures in contemporary America through its political, philosophical, literary and artistic creations and its relationship to the overall diversified cultural pattern. A general elective for upper division and graduate students. 4 credits.

SOCIAL SCIENCE

Harold Lieberman, Chairman

MASTER OF SCIENCE.

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in one of the following: social studies, economics, political science, or sociology. In some cases, the applicant may be required to complete additional undergraduate course work even though he has completed a major or minor in one of these fields. The student may elect to concentrate in economics, political science, or sociology, with some course work in the other fields, or he may elect to emphasize the social sciences more equally.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research.
Ed. 615 Introduction to Research, 3 credits.
- II. Major: Minimum, 24 credits.
A. Prescribed: 699 Master's Thesis Plan A only, 3-9 credits.
B. Elective: Selected course work to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

560. Social Science Seminar. Analysis of issues or problems of an interdisciplinary social science nature. A specific topic will be selected each time the course is offered. May be repeated. 1-4 credits.

570. Area Studies Seminar. Analysis of contemporary social, political, and economic conditions of an area. A specific country or region will be selected each time the course is offered. May be repeated. 1-4 credits.

572. Methods in Social Research. Topics include philosophy of social science, design of inquiry, model-building, and decision-making. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

630. Problems in the Social Sciences. An examination of the methods used and the problems faced in the various social science disciplines. Not open to students with a major or minor in Social Science. 3 credits.

699. Master's Thesis. 3-9 credits.

SOCIAL STUDIES

COURSES FOR GRADUATE STUDENTS ONLY

640. Recent Trends in Teaching Social Studies in Secondary School. The secondary school social studies program viewed in light of new methods, curriculum trends, materials, and philosophies. 3 credits.

MASS COMMUNICATIONS

Chairman: R. John DeSanto

Graduate Faculty: DeSanto, Martin

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

541. Magazine Article Writing. Writing varied special types of articles for newspapers, magazines, and professional journals. Markets: the adaptation of content to meet needs of specific publications. 3 credits.

545. Advanced Photojournalism. Lecture and laboratory in photojournalism production for newspapers, magazines, company publications, television, etc. Photojournalism history, theory, trends, legal aspects, ethics, composition, special techniques, idea development and execution of picture stories and essays. Prereq: 345 or consent of instructor. 4 credits.

550. Advanced Editing and Makeup. Current trends in format, makeup, and typography of newspapers and magazines; special problems of makeup; editing and makeup of special pages and selections; attention to solutions of problems by outstanding small-city dailies and weeklies. Prereq: 350, 355. 3 credits.

560. Mass Communications Law. Freedom of the press with emphasis on the electronic and printed media in the areas of First Amendment Rights, Libel, Censorship and government regulations; major theories of the press. 4 credits.

580. Junior and Senior High School Publications. Role of the faculty adviser; trends, administration-community relations, philosophies, problems; theoretical and practical considerations; content of journalism elective in school curriculum; lecture and laboratory portions depending on credit options. Prerequisites: 240 and 350, or equivalent. Consent of instructor. 2-4 credits.

581. Teaching Mass Communications. Theories, methods, materials and curriculum development for teaching mass communications in the secondary schools. Prereq: 220, consent of instructor. 3 credits.

587. Public Relations. Interpreting the school, business firm, or other organization for its various publics. Responsibilities of the public relations representative with respect to the community served. The over-all public relations program; the news bureau as a clearing house for publicity and informational materials. 3 credits.

MATHEMATICS

Chairman: Kent Carlson

Graduate Faculty: K. Carlson, R. Anderson, Bahauddin, Brink, Dull, Earles, Ernst, J. Johnson, L. Johnson, Lahren, Leitch, R. Nelson, Van Akin, Vandell

MASTER OF ARTS

The applicant for admittance to the M.A. program must have a bachelor's degree from an accredited college or university, with a major in mathematics and an overall grade point average of at least 2.8 with an average of 3.0 in the major. Students may be admitted provisionally. Final decision on admission will be made by the mathematics graduate faculty after consideration of entrance exam scores, undergraduate record, and letters of

recommendation. A minimum of 15 credits must be earned in the major in which enrollment is limited to graduate students.

Plan A, 45 credits; Plan B, 48 credits.

I. Credits in Mathematics.

Plan A. A minimum of 36 quarter hours including a thesis must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 36-hour requirement.

Plan B. A minimum of 39 hours must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 39-hour requirement.

II. Cognate Areas.

A maximum of 9 quarter hours may be taken in a related area acceptable to the student's adviser.

A final written examination must be successfully completed by all Plan B candidates. In addition, an oral exam may be required at the option of the Mathematics Graduate Faculty. Both a final written and a final oral examination must be successfully completed by all Plan A candidates. The oral examination will include a defense of thesis.

MASTER OF SCIENCE

An applicant for the M.S. degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in mathematics. In some cases, the applicant may be required to complete additional undergraduate work.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Master of Science: Mathematics — Junior High School Program.

Plan A, 45 credits; Plan B, 48 credits.

I. Research

Ed. 615, Introduction to Research, 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed: 699, Master's Thesis (Plan A only), 3-9 credits.

B. Electives: Select course work in mathematics to total 24 credits in the major. (The program is planned by the student and the mathematics adviser. Credits may be earned in both mathematics and mathematics education. The number of credits in each area to be determined by the needs of the student.)

III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the mathematics adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in mathematics and mathematics education.)

IV. Professional Education: Minimum, 9 credits (consent of secondary education adviser).

V. General Electives: Minimum, 3 credits.

Master of Science: Mathematics — Senior High School Program

Plan A, 45 credits; Plan B, 48 credits.

I. Research

Ed. 615, Introduction to Research, 3 credits.

II. Major: Minimum, 24 credits.

A. Prescribed: 699, Master's Thesis (Plan A only), 3-9 credits. Two 2-quarter mathematics sequences at the 600 level.

B. Electives: Selected course work in mathematics to total 24 credits in the major. (A maximum of three credits selected from the mathematics education courses).

III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the mathematics adviser from related fields, General Studies Core, Introduction to

Graduate Statistics, Interpretation of Research, or additional courses in mathematics and mathematics education courses.)

IV. Professional Education: Minimum, 9 credits (consent of secondary education adviser).

V. General Electives: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

515. Number Theory. Prime and composite integers. Diophantine analysis, number congruences, quadratic residues. Prerequisite: Math. 254. 3 credits.

536. Complex Variables. The algebra of complex numbers; analytic functions; contour integrals; power series. Prerequisite: Math. 354, or consent of instructor. 3 credits.

537. Probability and Statistics I. Axiomatic development of probability; continuous and discrete sample spaces; random variables; probability density functions; conditional probability; Bayes' Theorem; independence; mathematical expectation; Chebyshev's Inequality; some special distributions. Prerequisites: Math. 243, 254. 3 credits.

538. Probability and Statistics II. Distributions of functions of random variables, multidimensional random variables; t and f distributions; normal curve; moment generating functions; Central Limit Theorem; interval estimation; linear regression. Prerequisites: Math. 333, 437. 3 credits.

539. Probability and Statistics III. Point estimation and sufficient statistics; maximum likelihood estimation of parameters; decision functions, Bayesian procedures; statistical hypotheses; statistical tests; Markov chains. Prerequisite: Math. 438. 3 credits.

540. History of Mathematics. Historical survey of the development of mathematics. Prerequisite: Math 241. 3 credits.

545. Introduction to Real Analysis I. Sets and functions; complete ordered fields; sequences and series of real numbers. No calculus skills are required. Prerequisite: Math. 356. 3 credits.

546. Introduction to Real Analysis II. Limits; metric spaces; continuous functions; connectedness; completeness; compactness; uniform continuity. Prerequisite: Math. 445-545. 3 credits.

547. Introduction to Real Analysis III. Riemann integral; derivatives; theorems of calculus; sequences and series of functions; Lebesgue integral. Prerequisite: 446-546. 3 credits.

552. Recent Trends in Secondary School Mathematics. Number systems, sets, deduction, algebras, geometries, vectors, limits, functions, probability, computers, decisions. The changing mathematics curriculum. 4 credits.

555. Foundations of Mathematics. Operations on sets, relations and functions, cardinal number, ordinal arithmetic, the axiom of choice, axiomatic theories. 3 credits.

557. Linear Algebra. Vectors and vector spaces. Euclidean n -space, linear transformations, matrices, bilinear and quadratic forms, complex number field, polynomial rings. Prerequisite: Math. 242 and 356. 3 credits.

559. Recent Trends in Elementary School Mathematics. Modern approach to teaching arithmetic, teaching aids and devices, experimental work, recent research. 4 credits.

560. Topology. Metric spaces, topological spaces, separation of axioms, connectedness, compactness. Prerequisite: Math 356. 3 credits.

570. Numerical Analysis. Difference tables and application, interpolation, numerical integration and differentiation. Taylor's series, orthogonal polynomials, error analysis, numerical solution of equations, matrix theory. Laboratory in computer programming. Prerequisite: Math. 271 and 333. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

611. Teaching Mathematics in the Secondary School. Survey of mathematics curricular

developments, objectives and content of proposals for change in the mathematics curriculum, learning theory, issues and trends. 3 credits.

616. Teaching Geometry in the Secondary School. Historical development, current issues and trends, curricular reform movements, experimental programs and research findings. 3 credits.

619. Teaching Algebra in the Secondary School. Topics related to the teaching of algebra and related areas. Historical aspects, methodology, curricular developments, evaluation and research findings in algebra and related topics. 3 credits.

624. Modern Geometry I. An overview of Euclidean and non-Euclidean geometries, and the fundamentals of synthetic projective geometry. Topics for study include: Parallelism and Euclidean and non-Euclidean geometries, axiom systems, the projective plane, perspectives and projectivities, and conics in the projective plane. Prerequisite: One course in college level geometry. 3 credits.

625. Modern Geometry II. A continuation of 624, oriented toward transformational geometry. Topics for study include: Klein's Erlanger Program, an analytic model of the real projective plane, subgeometries of projective geometry, and circular transformations. Prerequisites: Math 624 and a background in groups, vector spaces, and matrices. 3 credits.

636. Complex Analysis I. The complex field, topology of the complex plane, analytic functions. 3 credits.

637. Complex Analysis II. Complex Integration Theory. Prerequisite: Math. 636. 3 credits.

638. Complex Analysis III. Complex series expansions, conformal mappings, Dirichlet's problem. Prerequisite: Math. 637. 3 credits.

643. Calculus for Secondary Teachers. Review of calculus involving limits, integration, differentiation of elementary functions, and applications. Cannot be used in the M.A. program or part of the 24 quarter hours of mathematics in the M.S. program. 4 credits.

645. Real Analysis I. The real number system, Lebesgue Measure and Integration. 3 credits.

646. Real Analysis II. Differentiation, Abstract Spaces. Prerequisite: 645. 3 credits.

647. Real Analysis III. Generalized Measure and Integration. Prerequisite: 646. 3 credits.

656. Modern Algebraic Theory I. Group theory; rings and ideals; polynomials. Prerequisite: Math. 356. 3 credits.

657. Modern Algebraic Theory II. Fields; field extensions; Galois theory. Prerequisite: Math. 656. 3 credits.

658. Modern Algebraic Theory III. Selected topics from the theory of modules or homological algebra. Prerequisite: Math 657. 3 credits.

660. Topology I. Topological spaces, product spaces, nets and filters, compactness. Prerequisite: Math 356. 3 credits.

661. Topology II. Connectedness, separation axioms, metric spaces, completeness, comparison of topologies, function spaces. Prerequisite: Math. 660. 3 credits.

662. Topology III. Topics from uniform spaces, topological groups and algebras, algebraic topology. Prerequisite: Math. 661. 3 credits.

671. Computer Programming. Concepts of programming Fortran. Writing a program to solve an approved problem in the major field. Laboratory. Prerequisite: Approval of instructor and students' major adviser. 3 credits.

680. Graduate Seminar. Reading, research, and discussion of selected topics. Prerequisite: Consent of instructor. 1-3 credits.

699. Master's Thesis. 3-9 credits.

PHILOSOPHY

Chairman: Myron Anderson

Graduate Faculty: M. Anderson, Corliss, Kohlenberg, A. Phillips, J. Phillips, White, Yoos

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

510-529. Special Studies. Seminar for intensive study of a particular philosopher (as announced in the class schedule), or of the philosophical problems in a special discipline, such as history or biology or behavioral sciences. 2-4 credits.

531. Philosophy of Art. A general introduction to philosophical questions relating to the fine arts. 4 credits.

532. Film Aesthetics. An introduction to motion pictures as an art form and a critical examination of various theories of film. Special attention to: Russian theories of montage, the **Auteur** theory, and the realist thesis. (The student may be asked to make a short film in order to better understand certain aspects of film art). 4 credits.

533. Philosophy of History. An examination of the main problems and concepts of the philosophy of history; the nature of historical explanation, historicism, objectivity, and meaning in history. 4 credits.

542. History of American Philosophical Thought. Tracing of the course of development of American philosophy from its beginnings: Puritanism, Transcendentalism, Idealism, Pragmatism, Realism, and Contemporary Analysis. 4 credits.

PHYSICS

Chairman: Philip Youngner

Graduate Faculty: Youngner, Eckroth, Ellis, Garrity, Lesikar, McWilliams, W. Pou, Watkins

MASTER OF SCIENCE-Physical Science

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed an undergraduate major in either physics, chemistry or earth science with some work in the other fields and in mathematics. In some cases the applicant may be required to complete additional undergraduate work even though he may have completed a major in one of the three fields.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

- I. Research
Ed. 615 Introduction to Research, 3 credits.
- II. Major: Minimum, 24 credits.
 - A. Prescribed: 699 Master's Thesis (Plan A only), 3-9 credits.
 - B. Elective: Selected course work in physics, chemistry or earth science to total 24 credits in the major.
- III. Related Fields: Plan A, 6 credits; Plan B, 9 credits. (Credits to be selected with the major adviser from related fields, General Studies Core, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.)
- IV. Professional Education: Minimum, 9 credits (consent of Secondary Education adviser).
- V. General Elective: Minimum, 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

520. Seminar. Lectures, readings, discussions on selected topics. 1-4 credits.

530. Advanced Physics Laboratory. Advanced experiments relating to topics studied in senior college physics courses. Prerequisite: Physics 328 and 333. 3 credits.

531. Introduction to Quantum Mechanics I. The Schrodinger wave equation and solutions for some simple cases; eigenfunctions, eigenvalues, expectation values, potential

barrier problems, the harmonic oscillator, the hydrogen atom. Prerequisite: Physics 329 and Mathematics 434. 4 credits.

532. Introduction to Quantum Mechanics II. A continuation of Physics 431-531 in which the concepts of quantum mechanics are extended and some applications of quantum mechanics are discussed. Perturbation theory, angular momentum, transition probabilities, atomic and molecular spectra. Prerequisite: Physics 431-531. 4 credits.

533. Modern Physics. Energy bands in solids; theories of electrical and magnetic properties of solids; semi-conductors; the nucleus; nuclear reactions. Prerequisite: Physics 432-532. 3 credits.

535. Theoretical Physics — Mechanics I. Force fields, particle motions, rigid body motions, conservation laws, mechanics of deformable bodies, harmonic vibrations, resonance. Emphasis on vector-calculus methods. Prerequisite: 1 year college physics and Mathematics 432. 4 credits.

536. Theoretical Physics — Mechanics II. Conservative forces, mechanics of constrained particles, generalized coordinates, Lagrange's equations, Hamilton's equations, variational principles. Prerequisite: Physics 435-535. 4 credits.

537. Theoretical Physics — Electricity and Magnetism I. Electrostatics, Gauss' law, dielectric theory, electric current, Biot Savart law, steady current theory, magnetic induction, alternating current theory, transients. Emphasis on vector-calculus methods. Prerequisite: 1 year college physics and Mathematics 432. 4 credits.

538. Theoretical Physics — Electricity and Magnetism II. Poisson's equation, Laplace's equation, Maxwell's equations, Poynting vector, electro-magnetic waves. Prerequisite: Physics 437-537. 4 credits.

556. Methods for Teaching Science. Modern approaches to teaching science in junior or senior high school. Laboratory. 2 credits.

559. Methods and Materials for Teaching Physics. Modern approaches to teaching of high school physics in classroom and laboratory, including materials of Physical Science Study Committee. Laboratory. 2 credits.

577. Physics Institute. Selected topics in physics for experienced teachers of science. Laboratory. 3-6 credits.

COURSES FOR GRADUATE STUDENTS ONLY

601. Major Developments in Physical Sciences. General education course employing selected science experiences as a basis for explanations of major developments in area of physical science; their significance. Not open to students with majors or minors in physical science. 3 credits.

618. Atomic Physics for Science Teachers. Electrons, protons, neutrons, radiation, photo-electric effect, Bohr theory, atomic spectra, the periodic table, and X-Rays, de-Broglie waves. Special theory of relativity. Cannot be taken for credit if credit has been received in Physics 328. Prerequisite: 1 year college physics and integral calculus. 4 credits.

619. Nuclear Physics for Science Teachers. Radioactivity, the nucleus, nuclear reactions, cosmic rays. Cannot be taken for credit if credit has been received in Physics 329. Prerequisite: Physics 328 or 618. 4 credits.

699. Master's Thesis. 3-9 credits.

EARTH SCIENCE

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

520. Seminar. Lectures, readings, discussion on selected topics. May be repeated. 1-4 credits.

556. General Methods for Teaching Science. Modern approaches to teaching science in junior or senior high school. Laboratory. 2 credits.

560. Methods and Materials for Teaching Earth Science. Modern approaches to teaching junior high science in classroom and laboratory, including work on the major junior high science curricula with emphasis on the Earth Science curriculum projects. Laboratory. 2 credits.

577. Earth Science Institute. Selected topics in earth science for experienced teachers. 3-6 credits.

COURSES FOR GRADUATE STUDENTS ONLY

600. Special Problems. Independent study for advanced students wishing to work out a special problem in Earth Science. A maximum of four credits will be permitted on a graduate degree program. 1-4 credits.

699. Master's Thesis. 3-9 credits.

POLITICAL SCIENCE

Chairman: Akl Kairouz

Graduate Faculty: Kairouz, Schmidt, Williamson

Students interested in the area of Political Science must refer to the requirements of Social Science (Page 91).

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

511. Executive Process. Factors involved in the executive process; the White House Staff, relations with heads of departments, legislative leadership, defense responsibilities, foreign relations, party activities. Prerequisite: Pol. Sci. 211. 4 credits.

512. Legislative Process. Problems faced by democratic legislatures such as the influence of committees, political party influence, pressure groups. Prerequisite: Pol. Sci. 211. 4 credits.

513. Judicial Process. An examination of the structure, process and personnel of American courts with particular emphasis on the role of the United States Supreme Court in the American political system. Prerequisite: Pol. Sci. 211. 3 credits.

529. Seminar: _____. Discussion, readings, and research under faculty guidance and supervision. A specific topic selected each time offered. Prerequisites: Previous coursework in the subject matter area, or permission of the instructor. May be repeated. 1-4 credits.

552. International Organization. History and development of the community of nations, organization and authority of the League of Nations and of the United States and its auxiliary components. 4 credits.

563. American Political Thought. Study of the philosophy and theories which underlie the American system of democratic government and which have contributed to the formation of this system of government. Prerequisite: Pol. Sci. 211. 4 credits.

571. Political Parties. American party system: its structure, practices and policies as found in caucus, convention, campaign, and election procedures. Prerequisite: Pol. Sci. 211. 4 credits.

585. Administrative Law. Constitutional problems arising out of use of administrative agencies; administrative procedure; judicial relief against administrative action. 4 credits.

591. Constitutional Law. Supreme Court decisions relating to civil and political rights; powers of legislative, executive, and judicial departments; commerce; taxation; and other areas of judicial review. Prerequisite: Pol. Sci. 211. 3 credits.

592. The Courts and Civil Rights. Supreme Court decisions concerning voting, education, transportation, restaurants, individual rights. Prerequisite: Pol. Sci. 211. 3 credits.

COURSES FOR GRADUATE STUDENTS ONLY

619. American Government Seminar: _____. Research under faculty guidance and supervision. A specific topic selected each time offered. Prerequisite: Consent of instructor. May be repeated. 1-4 credits.

639. Comparative Government Seminar: _____. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq: consent of instructor. May be repeated. 1-4 credits.

659. International Relations and Organization Seminar: _____. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq: consent of instructor. May be repeated. 1-4 credits.

SOCIOLOGY AND ANTHROPOLOGY

Chairman: Claude DelZoppo

Graduate Faculty: DelZoppo, Baer, Deininger, Goodrich, Hartman, Hatcher, Kroeger

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

540. Social Role Theory. Relation of social roles to social organization, inter-action, deviant behavior, social change, social maintenance. Prerequisite: Sociology 260. 3 credits.

542. Social Movements. Analysis of social movements; origin in discontent; role of ideas, personal relationships, organizational factors in their development. Some contemporary social movements. Prerequisite: Sociology 260. 3 credits.

545. Political Sociology. An analysis of structural and ideological factors influencing the development and legitimization of political institutions and of the sociological conditions influencing the processes of political participation. 3 credits.

547. World Population Problems. World population trends and pressures; their causes and consequences; war, international relations; standards of living; technological change; and cultural contrasts. Prerequisite: Sociology 260. 3 credits.

554. Collective Behavior. Unstable collectivities — collectivities with changing social structures. Nature, causes, and consequences of collective behavior in mobs, crowds, publics, etc. Prerequisite: Sociology 260. 3 credits.

556. Complex Organizations. Social and cultural characteristics of a variety of formal organizations, with emphasis on both theoretical and practical problems. Prerequisite: Sociology 260. 4 credits.

561. Sociology of Knowledge. Analysis of environmental and social correlates of a variety of belief systems as well as a study of the genesis, development, and decline of these belief systems. Prerequisite: Sociology 260. 4 credits.

562. Seminar. Discussion, readings, evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. May be repeated. Prerequisite: Sociology 260. 1-4 credits.

563. Seminar Discussion and Readings in Advanced Anthropology. A specific topic selected each time offered. May be repeated. Prerequisite: Sociology 250 or permission of department chairman. 4 credits.

565. Social Psychology. Influence of human relations and culture upon development of personality; comparative study of biological, ethnological, and culture approaches to individual, sex, and racial differences; development of attitudes and prejudices; study of propaganda, rumor, and other psycho-social phenomena. Prerequisite: Sociology 260. 4 credits.

569. Theory of Cultural Change. An examination of various theoretical approaches to the dynamics of culture change. Prerequisite: Sociology 250. 4 credits.

570. Minority Group Cultures and Contributions: _____. Minority-group cultures and contributions and the position of minority groups in American society. Group similarities and differences and social factors related to these. Different minority groups will be focused upon in the course, depending on the particular emphasis of the instructor. 4 credits.

573. Issues and Practice in Social Welfare. Background of the modern social work movement and development in its underlying theory. Prerequisite: Sociology 260 and 365. 3 credits.

576. American Social Institutions. The structure and interrelations of the major institutions of modern American society. Institutions as agencies of social control, and institutional disorganization as an effect of social change. Prerequisite: Sociology 260. 4 credits.

585. Contemporary Sociological Theory. Systematic organization of concepts and principles for the explanation of social phenomena and as a guide to contemporary sociological research. Prerequisite: Sociology 260. 3 credits.

590. Field Methods in Anthropology. A general survey of anthropological field methods with practical application of selected specialized methods and techniques to a supervised program of field-work in one of the major subdisciplines of anthropology, archaeology, ethnography, or linguistics. Consent of instructor. 1-8 credits.

COURSES FOR GRADUATE STUDENTS ONLY

644. Public Opinion and Propaganda. Nature, function, formation, and measurement of public opinion; attempts to influence public opinion; propaganda. Prerequisite: Sociology 260. 4 credits.

667. Principles of Cultural Anthropology. Concepts and theories of anthropology. Analysis of tribal and peasant cultures; comparison with more complex societies. Prerequisite: Sociology 250 or 260. 4 credits.

668. Minority Groups in Society. Patterns of social dominance and subordination. Causes and consequences of prejudice and discrimination. Sociological theory and dominant-minority relations. Reduction of intergroup conflict. Prerequisite: Sociology 260. 4 credits.

SPEECH COMMUNICATION

Chairman: Donald Sikkink

Graduate Faculty: Sikkink, Hannah, Kendall, C. Vick, Wick

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

515. Rhetorical Criticism. Concepts, terminology, methods and literature of rhetorical criticism. Prereq: Speech 220 or instructor consent. 4 credits.

521. American Public Address I. Major speakers in American history studied from a rhetorical perspective. Prerequisite: Speech 415. 3 credits.

522. American Public Address II. Rhetorical analysis of significant American speakers of the twentieth century. Prerequisite: Speech 415. 3 credits.

523. Contemporary Public Address. Critical analysis of speakers and speeches as they relate to significant political, economic, and social issues since 1940. Special consideration given to the problems of contemporary rhetorical criticism. 3 credits.

524. British Public Address. Selected British speeches in historical and rhetorical perspectives. 4 credits.

530. Modern Theories of Communication. Introduction to theories of human communication including theories of the neurophysiological, perceptual and semantic foundations of communication and theories and models of human interaction. 4 credits.

535. Theories of Small Group Process. Introduction to theories of small group processes, particularly as they relate to communication within and between small groups. 4 credits.

540. Advanced Public Speaking. Exploration in depth of speech principles through speech making and selected readings. 4 credits.

552. Teaching of Speech. Materials and methods for curricular and co-curricular teaching of speech in secondary schools. **Must** precede student teaching. Prerequisite: 15 credits in Speech. 4 credits.

580. Seminar in Speech Communications. Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. May be repeated. Prerequisite: Senior/graduate standing or permission of instructor. 4 credits.

COURSES FOR GRADUATE STUDENTS

615. Bibliography and Research in Speech. An introduction to graduate study in speech, with emphasis on bibliographical resources, research methodologies, research writing, and preparation of a thesis prospectus. 4 credits.

650. Seminar in Speech Education. 4 credits.

682. Seminar in Public Address. 4 credits.

684. Seminar in Rhetorical Theory. 4 credits.

699. Master's Thesis. 3-9 credits.

SPEECH SCIENCE, PATHOLOGY, AND AUDIOLOGY

Chairman: Martin Kammermeier

Graduate Faculty: Kammermeier, Corcoran, Jacobson

MASTER OF SCIENCE

Admission to the graduate program in Speech Science, Pathology, and Audiology requires completion of an undergraduate teacher education program from an accredited teacher preparation institution and completion of an undergraduate major in speech pathology or audiology. When a student has a Bachelor's degree in an area other than speech pathology or audiology, he may be admitted to the program on condition that he complete 24 quarter hours of undergraduate work in speech pathology and audiology. Requirements for admission related to academic standing are the same as those established by the graduate school.

Students pursuing a Master's degree must earn a minimum of 15 GRADUATE ONLY credits in their major field of concentration.

Plan A, 45 credits; Plan B, 48 credits.

I. Prescribed Courses:

A. Speech Science, Pathology and Audiology: 15 credits.

520 Experimental Phonetics, 3 credits.

560 Language Development, 3 credits.

620 Research in SSPA, 3 credits.

636 Diagnosis in Speech and Hearing, 3 credits.

642 Advanced Audiology, 3 credits.

B. Related Fields: 6 credits.

Psychology 663 Applied Theories of Learning, 3 credits.

Psychology 678 Introduction to Graduate Statistics, 3 credits.

II. Elective Courses: Plan A, 9-15 credits; Plan B, Minimum, 21 credits (consent of adviser). The emphasis may be in the major field or in a related area.

III. Practicum: SSPA 651 Practicum, 6 credits.

IV. Master's Thesis: 3-9 credits.

The Fifth Year Program

I. Prescribed courses: (same as M.S. degree).

II. Elective courses: These courses are to be elected in conference with the major adviser. Students are reminded that they must have a minimum of 15 credits in

courses which are open only to graduate students. Courses from the 300, 400, 500, and 600 level will be acceptable. 18 credits.

III. *Practicum*: SSPA 651, 6 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

520. Experimental Phonetics. Relationship between the acoustic features of speech sounds and perceptions of speech. 3 credits.

555. Speech as Operant Behavior. Behavior modification applied to clinical and research problems in speech pathology and audiology. 3 credits.

560. Language Development. Speech and language acquisition in normal children. 3 credits.

561. Delayed Speech and Language. Etiology, theory and supporting research, and approaches to treatment of delayed speech and language. 3 credits.

COURSES FOR GRADUATE STUDENTS

620. Research in Speech Pathology and Audiology. Evaluation of methods and results of original research; experimental design; statistical procedures. 3 credits.

634. Cleft Palate. Communication problems which occur in conjunction with cleft palate. Etiology: anatomy and physiology involved in velopharyngeal closure; surgical, orthodontic, and prosthodontic treatment; articulation, voice, language, and auditory problems associated with cleft palate. 3 credits.

635. Aphasia. Speech and language problems related to stroke and other forms of brain trauma. Comparison of current tests for aphasia and approaches to therapy for the aphasic patient. 3 credits.

636. Diagnosis in Speech and Hearing. Evaluation and use of diagnostic tools. Includes participation in diagnostic evaluations and preparation of clinical reports. 3 credits.

637. Dysarthria. Speech problems related to deficiencies of the central nervous system. Etiology in different age groups. Effects on articulation, phonation, respiration, resonance, and prosody. Approaches to speech therapy. 3 credits.

642. Advanced Audiology. Above-threshold audiometric testing. Objective audiometry. Aid fitting. Auditory training. 3 credits.

651. Graduate Practicum in Speech and Hearing. Application of theory and research to clinical problems. 1-3 credits.

670. Seminar: Voice. Critical evaluation of clinical and research data supporting current practices in treatment of voice disorders. 3 credits.

671. Seminar: Articulation. Critical evaluation of clinical and research data supporting practices in treatment of articulation disorders. 3 credits.

676. Seminar: Stuttering. Nature, etiology and treatment of stuttering with emphasis on published research. 3 credits.

699. Master's Thesis. 3-9 credits.

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Term expires 1975

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Education
Term expires 1975

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and Recreation
Term Expires 1976

Charles Rehwaldt

Department of Biology
Term expires 1976

Jonathan Lawson

Department of English
Term expires 1976

Myron Anderson

Department of Philosophy
Term expires 1976

GRADUATE FACULTY

FACULTY APPOINTMENTS

Acree, Kenneth

History
Ph.D., University of Wisconsin

Aiken, Joseph G.

Sculpture
M.F.A., University of Washington

Alhelm, Frank

Art
Ed.D. University of New Mexico

Anderson, Derwyn L.

Psychology
Ph.D., University of North Dakota

Anderson, Edna

Elementary Education
Ed.D., University of Minnesota

Anderson, James W.

Educational Administration
Ph.D., University of Minnesota

Anderson, Myron G.

Philosophy
Ph.D., Brown University

Anderson, Rowland G.

Mathematics
Ed.D., Columbia University

Arndts, Russell

Chemistry
Ph.D., Louisiana State University

Ayers, Floyd

Special Education
Ph.D., University of Minnesota

Baer, Roger K.

Sociology
Ph.D., University of Chicago

Bahauddin, Mohammed

Mathematics
Ph.D., New Mexico State University

Barker, Dorothy E.

Biology
Ph.D., University of Minnesota

Barker, S. Hugh

Biology
Ph.D., University of Wisconsin

Barrett, Roger

Music
Ph.D., State University of Iowa

Baschky, Richard

Theatre Arts
M.F.A., University of Iowa

Bavery, Edgar

Elementary Education
Ed.D., University of Northern Colorado

Benson, Robert G.

Marketing
Ph.D., State University of Iowa

Bergstrom, Philip G.

Industrial Education
Ed.D., Washington State University

Bjorklun, Eugene

Secondary Education
Ed.D., University of Nebraska

Bleick, Frances A.

Health, Physical Education and Recreation
D.P.E., Indiana University

Boltuck, Charles

Psychology
Ph.D., Indiana University

Bovee, John R.

English
Ph.D., Washington State University

Brewer, A. Wilbur

Secondary Education
Ed.D., Washington State University

Brink, Allen

Mathematics
Ed.D., University of Northern Colorado

Brown, David

Art
M.F.A., Indiana University

Brown, Luther

Library and Audiovisual Education
Ph.D., George Peabody College for Teachers

Bruhn, Marcus C.

Economics
Ph.D., University of Wisconsin

Bruton, Charles

Biology
Ph.D., University of North Dakota

Buckley, Chester

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Management and Finance
Ph.D., University of Minnesota

Cairns, Paul

English
Ph.D., University of Michigan

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Carlson, Kent

Mathematics
Ph.D., Montana State University

Carpenter, John

Chemistry
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Cates, Edwin H.

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Biology
Ph.D., Texas A. & M. University

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Coen, Rena

Art
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Coppock, Henry

Geography
Ph.D., Michigan State University

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Deininger, Marian M.

Sociology and Anthropology
Ph.D., University of Minnesota

DeZoppo, Claude

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Ph.D., University of Iowa

DeSanto, R. John

Mass Communications
Ed.D., University of Northern Colorado

Downes, Alan J.

Interdisciplinary Studies
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Dull, Alyn N.

Mathematics
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Earles, Robert

Mathematics
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Music
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Ellis, Bruce

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Erickson, John M.

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Ernest, David

Music
Ed.D., University of Colorado

Ernst, Charles I.

Mathematics
Ph.D., The Ohio State University

Ezell, Wayland

Biology
Ph.D., Oregon State University

Falk, Armand E.

English
Ph.D., Michigan State University

Farrah, George

Elementary Education
Ed.D., Wayne State University

Fields, Dennis C.

Library and Audiovisual Education
Ed.D., East Texas State University

Flom, James

Music
Ph.D., University of Minnesota

Frohrup, Kenton

Music
Ph.D., University of Minnesota

Frost, C. Robert

Interdisciplinary Studies
Ph.D., University of Denver

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Foreign Language
Ph.D., University of Montreal

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Sociology and Anthropology

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Ph.D., University of Cincinnati

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Grewe, Alfred

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Knox, Stanley
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Marketing and General Business
Ph.D., Kansas State University

Kukuk, William D.
Psychology
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Laakso, John W.
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Lawson, Jonathan N.
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Leitch, Vernon D.
Mathematics
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Leja, Alfred E.
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Lesar, David
Psychology
Ed.D., Indiana University

Lesikar, Arnold
Physics
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Lewis, James
Special Education
Ed.D., University of Nebraska

Lewis, Standley E.
Biology
Ph.D., Washington State University

Lieberman, Harold
Interdisciplinary Studies
D.S.S., Syracuse University

Liesch, James R.
Secondary Education
Ph.D., University of Minnesota

Lindstrom, Lester
Biology
Ph.D., Kansas State University

Little, Wayne G.
Business Education
Ph.D., University of Minnesota

Lofgreen, Harold A.

Economics
Ph.D., University of Iowa

Lohmann, Victor L.

Psychology
Ed.D., University of Missouri

Lovelace, William

Special Education
Ed.D., University of North Dakota

Lu, Debra

Business Administration
Ph.D., University of Minnesota

Lu, Ming te

Business Administration
Ph.D., University of Minnesota

Luker, Albert

Psychology
Ed.D., University of Northern Colorado

Luksetich, William A.

Economics
Ph.D., Northern Illinois University

Lundquist, James C.

English
Ph.D., University of Florida

McCue, John

Biology
Ph.D., University of Notre Dame

McMullen, James

Chemistry
Ph.D., University of South Dakota

McWilliams, Alexander S.

Physics
Ph.D., The Ohio State University

Madsen, Russell

Business Education and Office
Administration
Ph.D., University of Minnesota

Magnus, Douglas L.

Chemistry
Ed.D., University of North Dakota

Martin, Richard

Journalism
Ph.D., Syracuse University

Mason, John E.

Psychology
Ph.D., Kent State University

Massmann, John

History
Ph.D., University of Minnesota

Matthias, Howard E.

Industrial Education
Ph.D., Michigan State University

Meissner, William J.

English
M.F.A., University of Massachusetts

Melton, John L.

English
Ph.D., Johns Hopkins University

Menagh, H. Beresford

Fine Arts
Ph.D., University of Denver

Mork, David

Biology
Ph.D., Purdue University

Mork, Vernon N.

Secondary Education
Ed.D., University of North Dakota

Morse, Marjorie J.

History
Ph.D., University of Wisconsin

Mortrude, Gordon

Elementary Education
Ed.D., University of North Dakota

Mortrude, Lowell

Secondary Education
Ed.D., University of North Dakota

Murphy, Robert

Psychology
Ph.D., University of Tennessee

Nappi, Andrew

Economics
Ph.D., Ohio University

Nelson, J. Michael

Library and Audiovisual Education
Ed.D., East Texas State University

Nelson, Robert

Mathematics
Ph.D., Purdue University

Nestel, Gerald

Industrial Education
Ed.D., University of Arkansas

Nickles, William

Chemistry
Ph.D., North Dakota State University

Olson, Harry

Business Education
Ph.D., University of Minnesota

Osendorf, Frank P.

Health, Physical Education and
Recreation
H.S.D., Indiana University

Otto, Don H.

English
Ph.D., University of Southern
California

Overy, David H.

History
Ph.D., University of Wisconsin

Pabst, Alfred A.

Management and Finance
Ph.D., George Washington University

Park, Thomas

Elementary Education
Ed.D., University of Florida

Parch, Max L.

Biology
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Peck, John H.

Biology
Ph.D., University of California

Perkins, Eugene

Psychology
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Perry, Floyd

Education
Ed.D., University of Northern Colorado

Peterson, Dale W.

History
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Peterson, Donald G.

Biology
Ph.D., University of Minnesota

Peterson, Robin T.

Marketing
Ph.D., University of Washington

Phillips, Alan M.

Philosophy
Ph.D., Michigan State University

Phillips, John N.

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History
Ph.D., Ball State University

Pou, Carol

Biology
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Pou, Wendell

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Ph.D., Vanderbilt University

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Ed.D., George Peabody College for
Teachers

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Management and Finance
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Ramquist, Raymond C.

Library and Audiovisual Education
Ed.D., Indiana University

Redding, Arthur J.

Psychology
Ed.D., University of North Dakota

Reha, Rose

Business Education
Ph.D., University of Minnesota

Rehwaldt, Charles

Biology
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Reitzel, James D.

Marketing and General Business
J.D., Indiana University

Risberg, Douglas

Education
Ph.D., University of Wisconsin

Riseling, Robert L.

Art
M.F.A., University of Wisconsin

Rosenthal, Eugene

Psychology
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Rouch, Roger

Elementary Education
Ed.D., Ball State University

Roy, James

Art
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Rudans, Eriks D.

Art
M.F.A., University of Wisconsin

Ryan, Robert

Industrial Education
Ed.D., University of Northern Colorado

Samarrai, Alauddin

History
Ph.D., University of Wisconsin

Savage, Carl C.

Library and Audiovisual Education
Ed.D., School of Education, New Orleans Baptist

Scharf, Mary

Psychology
Ed.D., University of North Dakota

Schmidt, Orville

Political Science
Ph.D., West Virginia University

Schmidt, Russell H.

Elementary Education
Ed.D., University of Florida

Schrader, Shirley

Music
Ph.D., University of Michigan

Schulzetenberg, Anthony

Library and Audiovisual Education
Ed.D., University of North Dakota

Serdula, George

Health, Physical Education and Recreation
H.S.D., Indiana University

Sikkink, Donald

Speech
Ph.D., University of Minnesota

Smelser, Lawrence B.

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Ed.D., University of Oklahoma

Sorenson, David

Chemistry
Ph.D., University of Kansas

Stahlecker, Winston

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Summers, Marcia

English
Ph.D., University of Illinois

Thompson, Marvin

English
Ph.D., University of Minnesota

Thompson, Neil

Interdisciplinary Studies
Ph.D., University of Minnesota

Tideman, Philip L.

Geography
Ph.D., University of Nebraska

Tosh, Leo W.

English
Ph.D., University of Texas

Troyer, Beverly J.

Health, Physical Education, and Recreation
Ph.D., University of Minnesota

Van Akin, Everett F.

Mathematics
Ph.D., University of Minnesota

Vandell, Roland A.

Mathematics
Ed.D., University of North Dakota

VanNostrand, M. Eugene

Psychology
Ph.D., Boston University

VanPelt, Elizabeth

English
Ph.D., University of Illinois

Vaughter, Paul H.

History
Ph.D., University of Kentucky

Vick, Charles

Speech
Ph.D., University of Denver

Wallin, Leland

Art
M.F.A., University of Cincinnati

Watkins, Ivan W.

Physics
Ph.D., Texas A. & M. University

Waxlax, Robert G.

Health, Physical Education, and Recreation
Ph.D., University of Minnesota

Wentworth, Darrell F.

Management and Finance
Ph.D., University of Nebraska

White, James E.

Philosophy
Ph.D., University of Colorado

Whitford, Audra

Business Education
Ed.D., Columbia University

Whitlock, Delores

Health, Physical Education and Recreation
Ed.D., University of New Mexico

Wick, Robert H.

Speech

Ph.D., State University of Iowa

Williams, Melvin D.

Management and Finance

Ph.D., University of Illinois

Williamson, Homer E.

Political Science

Ph.D., University of Minnesota

Yoos, George

Philosophy

Ph.D., University of Missouri

Youngner, Philip

Physics

Ph.D., University of Wisconsin

ADMINISTRATIVE APPOINTMENTS

Armstrong, Warren

Dean, School of Liberal

Arts and Sciences

Ph.D., University of Michigan

Gillett, Lowell R.

Dean, School of Graduate Studies

Ed.D., University of North Dakota

Graham, Charles J.

President

Ph.D., University of Illinois

Ingwell, Paul

Director, Institutional Research

Ph.D., University of Minnesota

Lease, Alfred

Dean, School of Industry

Ph.D., University of Minnesota

Ludeman, Vernon L.

Assistant Dean, School of Graduate
Studies

Ed.D., University of Northern Colorado

Marmas, James G.

Dean, School of Business

Ed.D., Stanford University

Menagh, H. Beresford

Dean, School of Fine Arts

Ph.D., University of Denver

Patton, Dale

Counseling

Ed.D., Arizona State University

Rowland, Howard Ray

Director, Information Services

Ph.D., Michigan State University

Schelske, Alvin H.

Acting Dean, School of Education

Ed.D., Columbia University

Sprague, David

Acting Vice President

Student Life and Development

Ed.D., University of South Dakota

Tomlinson, John U.

Vice President, Academic Affairs

Ph.D., University of Kansas

COLLEGE SERVICES

ADMINISTRATIVE SERVICES

Auxiliary Services. This office is responsible for the maintenance and security of the college's buildings and land areas, including the care and operation of college equipment and facilities.

Campus Planning is concerned with the expansion and development of the college's buildings and land areas. In addition, long-range planning of physical facilities and developing policies regarding space utilization, construction, remodeling and related activities are coordinated through this office.

Computer Services. The Computer Center provides both education and administrative services with an IBM-1401 disk and tape system for programming and administration, and a Univac 1004 Terminal to the Univac 1106 Computer at Mankato. Provided also is a time sharing capability service.

Institutional Research. This office conducts studies needed for making administrative decisions, processes governmental questionnaires, advises faculty members on research activities and initiates research projects with other professional groups and institutions.

INSTITUTIONAL RELATIONS

Alumni Affairs. The Alumni Office maintains a file of graduates and serves as the liaison between the alumnus and the college. It keeps the alumnus informed about the college and his/her classmates. It provides opportunities for alumni to keep in touch with their college acquaintances through activities on and off campus. It is the vehicle through which alumni may give gifts of cash or property to the college.

Career Planning and Placement. The function of this office is to assist the undergraduates in developing their career plans and relating these plans to the employment market. Once the degree has or is about to be obtained, the office assists both current graduates and alumni in their search for suitable positions. The primary services include the assembling of a set of confidential placement credentials, distribution of job opportunity lists, forwarding of credentials to prospective employers, coordinating on-campus interviews, maintaining a career library, providing statistical information, and advising students regarding career opportunities and employment techniques.

Information Services. This office disseminates information of general interest about the college to various publics served by the institution. It provides the mass media with college news and photographs. It prepares and coordinates all official college publications. The office also assists outside groups in scheduling activities on the campus.

LEARNING RESOURCES SERVICES

Learning Resources Services' main function is to furnish the college with materials (both print and non-print) and facilities, located in Centennial Hall Learning Resources Center, Campus School Learning Resources Center and Radio and Television Services. Learning Resources Services provides circulation, production and distribution of materials and maintains an extensive collection of curriculum materials.

Educational Television facilities on campus are used for supplementing instructional programs, teaching courses by television, observing in the campus school, microteaching and public service. These facilities, provided by Learning Resources Services, include television equipment in the Performing Arts Center, Campus Laboratory School, Education Building, and portable equipment for use elsewhere on campus.

CENTER FOR ECONOMIC EDUCATION

The Center provides an inter-school program that has as a general objective the improvement of undergraduate and graduate economic education programs at the elementary, secondary and college levels of instruction. The Center initiates research projects, participates in the planning of new academic programs and provides resource assistance to elementary and secondary schools in Central Minnesota. This office conducts special adult education courses and offers symposiums and in-service workshops in economic education for teachers and curriculum supervisors. The Center emphasizes the development and distribution of economics curricular materials for classroom use and provides assistance to outside professional groups and institutions concerned with economic education.

COMMON MARKET

St. Cloud State College is a participating member of the Minnesota State College Common Market plan which permits a student who has spent one year in residence at St. Cloud to spend up to three quarters at any of the other Minnesota state colleges. The college also arranges internships for students through the Common Market program. Interested students should contact the Academic Affairs Office.

BUILDINGS AND GROUNDS

The date after each building name indicates the year that the building was completed and occupied.

CLASSROOM BUILDINGS

Brown Hall (1959). Supplements Mathematics and Science Center. Named for Joseph C. Brown, the ninth president, 1916-1927.

Business Building (1968). School of Business classrooms and offices, together with the Center for Economic Education and Bureau of Business Research.

Eastman Hall (1929). This building has a swimming pool and gymnasium. Named for Alvah Eastman, a former resident director and member of the State College Board.

Education Building (1971). Facilities for secondary, elementary and special education together with psychology, speech pathology and audiology, guidance and counseling and student teaching are located in this building.

Gray Campus Laboratory School (1958, 1962). Elementary school for approximately 225 students. A 200-seat auditorium, children's library and closed-circuit television. Named for Thomas J. Gray, president, 1881-1890.

Halenbeck Hall (1965). Health, physical education and recreation building with a main gymnasium seating 7,500, a swimming pool, diving pool and two small gyms. Named for Dr. Philip L. Halenbeck, a St. Cloud physician.

Headley Hall (1962). School of Industry building with shops, laboratories, classrooms and offices plus a lecture auditorium seating 150. Named for John W. Headley, president, 1947-1951.

Kiehle (1952). Former library, remodeled for use primarily by Department of Art.

Mathematics and Science Center (1973). This four-story structure includes, in addition to classrooms and laboratories, a planetarium, museum, greenhouse, observatory, aquarium, computer-calculator room and high energy linear accelerator for nuclear research. It is connected to Brown Hall by an enclosed elevated walkway.

Performing Arts Center (1968). Music, speech and theatre classrooms and offices, with a main theatre seating 485, a studio theatre/recital hall seating 300, rehearsal hall, private practice studios and television studio.

Riverview (1911). English classrooms and foreign language laboratories plus offices.

Stewart Hall (1948). Largest classroom building on campus with bookstore and an auditorium seating 1,200. Named for Warren H. Stewart, a St. Cloud attorney who was resident director, 1938-1948.

RESIDENCE HALLS

Benton Hall (1967, 1968). Apartment-type residence for men and women. 300 beds. Named for Benton County.

Case Hall (1964). Men's residence hall with 200 beds. Named for Marie E. Case, former faculty member.

Hill Hall (1962). Women's residence hall with 200 beds. Named for Helen Hill, former faculty member.

Holes Hall (1965). First high-rise with nine stories, housing 400 women. Named for W. W. Holes, former member of the State College Board.

Mitchell Hall (1957, 1959). Women's residence hall with 420 beds. Named for W. B. Mitchell, former resident director.

Sherburne Hall (1969). Tallest building on campus, housing 504 men and women. Named for Sherburne County.

Shoemaker Hall (1915, 1960). Capacity for 520 students. Also houses Minority Culture Center. Named for Waite A. Shoemaker, president, 1902-1916.

Stearns Hall (1966). Companion building to Holes Hall housing 400 men. Named for Stearns County.

SERVICE BUILDINGS

Alumni House (1972). Former private residence now used by the Alumni Association. Located on Fourth Avenue at Eighth Street, across from Barden Park.

Atwood Memorial College Center (1966, 1972). Houses dining and recreation facilities and meeting rooms for students and faculty. Named for the Clarence L. Atwood family.

Carol Hall (1946). Originally a private home, then a women's residence hall, now an office building. Named for Carol Selke, wife of President George A. Selke.

Centennial Hall Learning Resources Center (1971). Houses the Learning Resources Center which includes all materials and services usually found in the library and audiovisual services; a random/remote access information system; classrooms and laboratories for the Department of Library and Audiovisual Education; and Computer Services. Ground was broken during the college's Centennial year, 1969.

Garvey Commons (1962, 1965). Two dining rooms with cafeteria service seating 500 at one time. Named for Beth Porter Garvey, first dean of women.

Lawrence Hall (1905). Faculty office building. Oldest structure on campus. Named for Isabel Lawrence, president, 1915-1916.

Maintenance Building (1964). Provides shops, warehouse and vehicle storage for the campus. Attached to the Heating Plant.

Whitney House (1956). Former private residence now used for the president's office and other administrative offices. A gift to the college from the heirs of A. G. Whitney.

OTHER PROPERTIES

Beaver Islands. A group of islands in the Mississippi River one-half mile south of the campus used for the study of plant and animal life. Named by Zebulon Pike, who explored the area in 1805.

George W. Friedrich Park. This 130-acre tract one mile east of the campus contains granite quarry ponds and extensive pine plantings used for nature study and recreation. Named for George W. Friedrich, former faculty member.

Selke Field. Varsity athletic field containing a baseball diamond, cinder track and football field, enclosed by a granite wall. Named for George A. Selke, president, 1927-1943.

Talahi Woods. This upper river terrace area is being preserved as an oak savannah and is to be retained in its natural condition for biological study.

In 1970 the college gained custodial control of 655 acres of unimproved state land adjoining Highway 10 east of the St. Cloud Reformatory. The college will make multiple use of the area, including such activities as environmental studies and recreational programs.

ACADEMIC CALENDAR 1974-1975

1974 FIRST SUMMER SESSION

Monday / June 10
Tuesday / June 11
Friday / June 14

Friday / June 28
Thursday / July 4
Friday / July 12

Registration and payment of fees
Classes begin. Late fees apply
Deadline for class changes, fees and graduation applications
Deadline for dropping courses
Independence Day (Holiday)
First Summer Session ends at 4:00 p.m.

1974 SECOND SUMMER SESSION

Monday / July 15
Tuesday / July 16
Friday / July 19

Friday / August 2
Thursday / August 15
Friday / August 16

Registration and payment of fees
Classes begin. Late fees apply
Deadline for class changes, fees, and graduation applications
Deadline for dropping courses
Summer Commencement
Second Summer Session ends at 4:00 p.m.

1974 FALL QUARTER

Wednesday / September 4
Thursday / September 5
Friday / September 6
Wednesday / September 11
Monday / September 16
Wednesday / September 18
Monday / October 14
Friday / October 18
Monday / November 11
Friday / November 22

Faculty Meetings and New Student Days
Registration and payment of fees
Classes begin. Late fees apply
Deadline for class changes
Deadline for graduation applications
Last day to pay fees
Columbus Day (Holiday)
Deadline for dropping courses
Veteran's Day (Holiday)
Fall Commencement

1974-75 WINTER QUARTER

Monday / December 2
Tuesday / December 3
Monday / December 9
Monday / December 16
Monday / December 16
Friday / December 20

Monday / January 6
Friday / January 31
Monday / February 17
Friday / February 28

Registration and payment of fees
Classes begin. Late fees apply
Deadline for class changes
Last day to pay fees
Deadline for graduation applications
Christmas vacation begins at end of regularly scheduled classes
Classes resume
Deadline for dropping courses
Presidents' Birthday (Holiday)
Winter Commencement

1975 SPRING QUARTER

Monday / March 10	Registration and payment of fees
Tuesday / March 11	Classes begin. Late fees apply
Monday / March 17	Deadline for class changes
Monday / March 24	Last day to pay fees
Monday / March 24	Deadline for graduation applications
Friday / April 25	Deadline for dropping courses
Friday / May 23	Spring Commencement

1975 FIRST SUMMER SESSION

Monday / June 9	Registration, payment of fees, and deadline for graduation applications
Tuesday / June 10	Classes begin. Late fees apply
Friday / June 13	Deadline for class changes and payment of fees
Friday / June 27	Deadline for dropping courses
Friday / July 4	Independence Day (Holiday)
Friday / July 11	First Summer Session ends at 4:00 p.m.

1975 SECOND SUMMER SESSION

Monday / July 14	Registration, payment of fees, and deadline for graduation applications
Tuesday / July 15	Classes begin. Late fees apply
Friday / July 18	Deadline for class changes and payment of fees
Friday / August 1	Deadline for dropping courses
Thursday / August 14	Summer Commencement
Friday / August 15	Second Summer Session ends at 4:00 p.m.

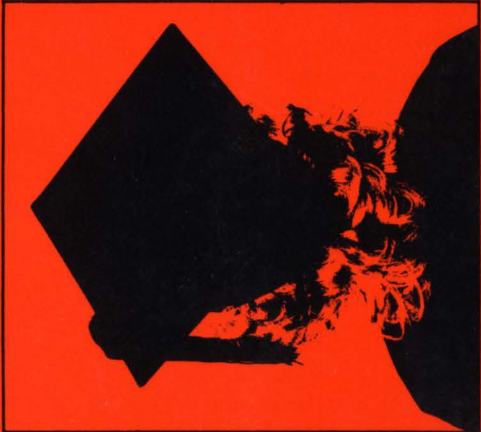
This calendar is subject to change in the event of a fuel emergency.

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ST. CLOUD STATE COLLEGE
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ST. CLOUD, MINNESOTA 56301



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